

CCTV PRODUCTS CATALOG 2007



LINE UP



DVR

















Controller





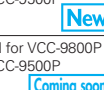


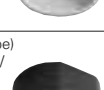












Monitor






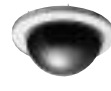



Camera

1/4" Color CCD High-resolution AF Speed Dome Camera VCC-9800P P.7 DAY NIGHT	
36x Optical zoom	
1/4" Color CCD High-resolution AF Speed Dome Camera VCC-9700P P.7	
36x Optical zoom	
1/4" Color CCD High-resolution AF Speed Dome Camera VCC-9600P P.8 DAY NIGHT	
30x Optical zoom	
1/4" Color CCD High-resolution AF Speed Dome Camera VCC-9500P P.8	
30x Optical zoom	
1/4" Color CCD High-resolution Vandal-resistant PT Network Dome Camera VDC-DPN9585P P.11 DAY NIGHT	
2.6x Optical zoom	Network PAN-FOCUS
1/4" Color CCD High-resolution PT Indoor mini Network Dome Camera VCC-PN9575P P.11	
2.6x Optical zoom	Network PAN-FOCUS
1/4" Color CCD High-resolution Vandal-resistant PT Dome Camera VDC-DP9585P P.14 DAY NIGHT	
2.6x Optical zoom	PAN-FOCUS
1/4" Color CCD High-resolution PT Indoor mini Dome Camera VCC-P9575P P.15	
2.6x Optical zoom	PAN-FOCUS
1/4" Color CCD High-resolution Vandal-resistant Dome Camera VDC-DP7585P P.16 DAY NIGHT	
2.6x Optical zoom	PAN-FOCUS
1/4" Color CCD High-resolution Indoor mini Dome Camera VCC-P7575PA P.16	
2.6x Optical zoom	PAN-FOCUS
1/4" Color CCD High-resolution Weatherproof Zoom Camera VCC-XZ200P P.18 DAY NIGHT	
2.6x Optical zoom	PAN-FOCUS
1/4" Color CCD High-resolution Weatherproof Auto Focus Zoom Camera VCC-XZ400P P.21 DAY NIGHT	
22x Optical zoom	
1/4" Color CCD High-resolution Auto Focus Zoom Camera VCC-ZM400P P.22 DAY NIGHT	
22x Optical zoom	
1/4" Color CCD High-resolution Auto Focus Zoom Camera VCC-ZM300PA P.22	
22x Optical zoom	

1/3" Color CCD High-resolution Wide Dynamic Range Vandal-resistant Dome Camera with Vari-focal Lens VDC-W1595VP P.23	
1/3" Color CCD High-resolution Vandal-resistant Dome Camera with Vari-focal Lens VDC-D1585VP P.23 DAY NIGHT	
1/3" Color CCD High-resolution Vandal-resistant Dome Camera with Vari-focal Lens VDC-C1575VP P.24	
1/3" Color CCD Indoor mini Dome Camera with Vari-focal Lens VCC-9615P P.24	
1/3" Color CCD High-resolution Wide Dynamic Range Camera VCC-WD8575P P.25 DAY NIGHT	
1/3" Color CCD High-resolution Camera VCC-4795P P.26 DAY NIGHT	
1/3" Color CCD High-resolution Camera VCC-4790P P.26 DAY NIGHT	
1/3" Color CCD High-resolution Camera VCC-6592P P.27	
1/3" Color CCD High-resolution Camera VCC-6585P P.27	
1/3" Color CCD High-resolution Camera VCC-6580P P.28	
1/3" Color CCD High-resolution Camera VCC-5885P P.28	
1/4" Color CCD Camera VCC-4115PA P.29	
1/4" Color CCD Camera VCC-4110P P.29	
1/3" B/W CCD High-resolution Camera VCB-3385P P.30	
1/3" B/W CCD High-resolution Camera VCB-3380P P.30	











1/3" B/W CCD High-sensitivity Camera VCB-3455P P.30	
1/3" B/W CCD High-sensitivity Camera VCB-3450P P.30	
Dummy Dome-shaped Camera VC-0996 P.33	
Dummy Camera VC-0924 P.33	
Lens	
Wide-angle IR Lens for 1/3" CCD Camera (f=4.0 mm) VA-13FG04IR P.31	
Wide-angle IR Lens for 1/3" CCD Camera (f=6.0 mm) VA-13FG06IR P.31	
Wide-angle IR Lens for 1/3" CCD Camera (f=8.0 mm) VA-13FG08IR P.31	
Super Wide-angle IR Lens for 1/3" CCD Camera (f=2.8 mm) VA-13FG28IR P.31	
Standard Vari-focal IR Lens for 1/3" CCD Camera (f=2.8 to 11 mm) VA-13VG2811ASIR P.32	
Standard Vari-focal IR Lens for 1/3" CCD Camera (f=3 to 8 mm) VA-13VG308ASIR P.32	
Tele Vari-focal Lens for 1/3" CCD Camera (f=5 to 50 mm) VA-13VG550T-LY P.32	
Standard Vari-focal Lens for 1/3" CCD Camera (f=3 to 8 mm) VA-13VG308AS P.32	
Camera Accessories	
Camera Control Unit for VCC-9800P / VCC-9700P / VCC-9600P / VCC-9500P / VDC-DPN9585P / VCC-PN9575P / VCC-DP9585P / VCC-P7575PA / VCC-WD8575P / VCC-ZM400P / VCC-ZM300PA / VCC-XZ400P / VCC-XZ200P / VAC-70 P.33	
Network recorder for VCC-9800 series + Network board / VDC-DPN9585P / VCC-PN9575P VCC-XZ200P + Network board VDC-DP7585P + Network board VCC-P7575PA + Network board VA-SW3050 P.20	

JPEG Network board for VCC-9800P / VCC-9700P / VCC-9600P / VCC-9500P VA-80LAN P.8, 19 New	
JPEG / H.264 Network board for VCC-9800P / VCC-9700P / VCC-9600P / VCC-9500P VA-82LAN P.8, 19 Coming soon	
Outdoor Housing for VCC-9800P / VCC-9700P / VCC-9600P / VCC-9500P VA-80EX P.9 New	
Surface Cover for VCC-9800P / VCC-9700P / VCC-9600P / VCC-9500P VA-80F P.9 New	
In-Ceiling Bracket (closed type) for VCC-9800P / VCC-9700P / VCC-9600P / VCC-9500P VA-80ME P.9 New	
In-ceiling bracket (open type) for VCC-9800P / VCC-9700P / VCC-9600P / VCC-9500P VA-80MF P.9 New	
Clear dome cover (outdoor housing) for VCC-9800P / VCC-9700P / VCC-9600P / VCC-9500P VA-CM8C P.9 New	
Smoked dome cover (outdoor housing) for VCC-9800P / VCC-9700P / VCC-9600P / VCC-9500P VA-CM8S P.9 New	
Smoked dome cover (indoor housing) for VCC-9800P / VCC-9700P / VCC-9600P / VCC-9500P VA-CZ80 P.9 New	
Attachment (Indoor use) for VCC-9800P / VCC-9700P / VCC-9600P / VCC-9500P VA-80A P.10 New	
Corner mounting adaptor for VCC-9800P / VCC-9700P / VCC-9600P / VCC-9500P VA-80AC P.10 New	
Pole mounting bracket for VCC-9800P / VCC-9700P / VCC-9600P / VCC-9500P VA-80AP P.10 New	
Pendant mounting bracket for VCC-9800P / VCC-9700P / VCC-9600P / VCC-9500P VA-80BP P.10 New	
Wall mounting bracket for VCC-9800P / VCC-9700P / VCC-9600P / VCC-9500P VA-80BW P.10 New	
Wall mounting bracket for VA-50AL / VA-50AS VA-50BW P.17	
Ceiling suspension bracket for VA-50AL / VA-50AS VA-50BPL P.17	

Ceiling suspension bracket for VA-50AL / VA-50AS VA-50BPS P.17	
Attachment for VDC-DP9585P / VDC-DP9585P / VDC-DP7585P VA-50AL P.17	
Attachment for VCC-PN9575P / VCC-P9575P / VCC-P7575PA VA-50AS P.17	
JPEG Network board for VCC-XZ200P VA-20LAN P.18, 19, 20	
SSP+Twisted pair board for VCC-XZ200P VA-20ST P.18	
JPEG Network board for VDC-DP7585P / VCC-P7575PA VA-50LAN P.16, 19, 20	
JPEG Network board (PoE) for VDC-DP7585P / VCC-P7575PA VA-51LAN P.16, 19, 20	
SSP+Twisted pair board for VDC-DP7585P / VCC-P7575PA VA-50ST P.16	
Heater board for VCC-XZ200P / VDC-DP9585P / VDC-DP9585P / VDC-DP7585P VA-50H P.12, 14, 16, 17, 18	
Smoked Cover for VCC-PN9575P / VCC-P9575P / VCC-P7575PA VCZ-50 P.12, 16, 17	
Half-Mirror Cover for VCC-PN9575P / VCC-P9575P / VCC-P7575PA VCZ-51 P.12, 16, 17	
In-Ceiling Bracket for VCC-9615P VA-DK01 P.24	
In-Ceiling Bracket for VDC-DP9585P / VCC-PN9575P / VDC-DP9585P / VCC-P9575P / VDC-DP7585P / VCC-P7575PA / VDC-W1595VP / VDC-D1585VP / VDC-C1575VP VA-DK02 P.17, 24	
Dome Camera housing VA-CDH60 (Smoked cover) VA-CDH60C (Clear cover) P.33	
Camera Mount Base VCT-92 P.33	
Camera Mount VCT-31 P.33	
DVR	
16-channel Hybrid Digital Video Recorder DSR-HB8000 P.39	
Preliminary	

16-channel Digital Video Recorder JPEG2000 DSR-5716P P.41	
New	
9-channel Digital Video Recorder JPEG2000 DSR-5709P P.41	
New	
16-channel Digital Video Recorder JPEG2000 DSR-5016PA P.43	
9-channel Digital Video Recorder JPEG2000 DSR-5009PA P.43	
16-channel Digital Video Recorder M-JPEG DSR-3716PA P.45	
9-channel Digital Video Recorder M-JPEG DSR-3709PA P.45	
6-channel Digital Video Recorder M-JPEG DSR-3706PA P.47	
1-channel Digital Video Recorder M-JPEG DSR-300P P.48	
4-channel Digital Video Recorder MPEG-2 DSR-M814PA P.49	
1-channel Digital Video Recorder MPEG-2 DSR-M810PA P.49	
16-channel Digital Video Recorder MPEG-4 DSR-2016 P.51	
Coming soon	
4-channel Digital Video Recorder MPEG-4 DSR-2004 P.52	
DVR Accessories	
External HDD Unit for DSR-5709P / DSR-5716P / DSR-5009PA / DSR-5016PA VA-EXH P.38, 42, 44	
Disc Writer Unit for DSR-5709P / DSR-5716P / DSR-5009PA / DSR-5016PA VA-EXD1 B P.38, 42, 44	

Disc Writer Unit for DSR-3706PA / DSR-3709PA / DSR-3716PA VA-EXD1 W P.38, 46, 47	
SCSI Board for DSR-5709P / DSR-5716P / DSR-5009PA / DSR-5016PA VZU-SCB1 P.40, 42, 44	
S-ATA Board for DSR-5709P / DSR-5716P VZU-SATB1 P.42	
New	
Hard Disk Tray for DSR-300P VA-DT300 P.48	
Communication Board for DSR-300P VZU-COM300 P.48	
CCTV system Management Software for DSR-5709P / DSR-5716P / DSR-5009PA / DSR-5016PA / DSR-3706PA / DSR-3709PA / DSR-3716PA VA-SW5000 P.42, 44, 46, 47	
Removable HDD Viewer Software for DSR-300P VA-SW300 P.48	
DVR Utility Software for DSR-M814PA / DSR-M810PA Series VA-SW8000 P.50	
SSP Control Unit	
SSP System Controller VSP-9000 P.34	
SSP System Controller VSP-8500 P.34	
New	
Matrix Switcher MPX-MX2005 P.56	
Extension Box MPX-EX200 P.56	
Extension Box with power MPX-EX210 P.56	
Video Distribution Box MPX-EX300 P.56	
32ch Alarm Board VA-EX8AB P.56	
8ch Extension Board w/coaxial VA-EX8CB P.56	

8ch Extension Board VA-EX8EB P.56	
8ch Main Board VA-EX8MB P.56	
Rack Mount Bracket	
Rack Mount Bracket (2U) VA-RACMK2 P.44, 46, 47, 48, 50	
Rack Mount Bracket (1U) VA-RACMK1	
Monitor	
19" Color LCD Monitor VMC-L1019P P.54	
17" Color LCD Monitor VMC-L1017P P.54	
15" Color LCD Monitor VMC-L1015P P.54	
19" Super High-resolution Color Video Monitor VMC-8619PA P.55	
15" Super High-resolution Color Video Monitor VMC-8615FP P.55	
LCD Monitor Bracket	
Wall Mounting Bracket VA-BWM2 P.53	
Arm Bracket VA-AWM3 P.53	
Rack Mount Bracket VA-RACMK 15/17/19 P.53	

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera · Lens

DVR

SSP System

Monitor

Example System

Camera Selection by Resolution

Camera

Super high resolution type

DAY NIGHT

VCC-9800P*
P.7VCC-9600P*
P.8VCC-XZ400P*
P.21VCC-ZM400P*
P.22VCC-XZ200P*
P.18VDC-DP9585P*
P.14VDC-DP7585P*
P.16

PAN-FOCUS

VCC-4795P
P.26VDC-D1585VP*
P.23VCC-4790P
P.26

Color

VCC-9700P*
P.7VCC-9500P*
P.8VCC-ZM300PA*
P.22VCC-6592P
P.27VCC-P9575P*
P.15VCC-P7575PA*
P.16

PAN-FOCUS

VDC-C1575VP*
P.24VCC-6580P
P.28VCC-6585P
P.27VCC-5885P
P.28

Network Camera

DAY NIGHT

VDC-DPN9585P*
P.11

PAN-FOCUS

Network

Optional item (sold separately)

VA-SW3050 P.20

Color

VCC-PN9575P*
P.11

PAN-FOCUS

Network

High resolution type

Color

Wide Dynamic Camera
VCC-W1595VP*
P.23VCC-9615P*
P.24

DAY NIGHT

Wide Dynamic Camera
VCC-WD8575P
P.25

B/W

VCB-3385P
P.30VCB-3380P
P.30

Standard resolution type

Color

VCC-4110P
P.29VCC-4115PA
P.29

B/W

VCB-3455P
P.30VCB-3450P
P.30

* Indicates products with a built-in lens, not requiring optional lenses.

DVR Selection by Compression

Hybrid MPEG-4

JPEG2000

16 or 9 ch

DVR



DSR-HB8000 P.39



DSR-5716P P.41



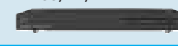
DSR-5709P P.41



DSR-5016PA P.43



DSR-5009PA P.43

Optional item
(sold separately)VA-EXH
P.38, 42, 44VA-EXD1 B
P.38, 42, 44

M-JPEG

16, 9, 6 or 1 ch



DSR-3716PA P.45



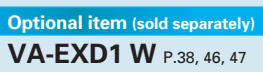
DSR-3709PA P.45



DSR-3706PA P.47



DSR-300P P.48



Optional item (sold separately)

VA-EXD1 W P.38, 46, 47

Optional accessories (sold separately)

VA-DT300, VZU-COM300 P.48



MPEG-2

4 or 1 ch



DSR-M814PA P.49



DSR-M810PA P.49

MPEG-4

16 or 4 ch



DSR-2016P P.51



DSR-2004P P.52

Software

Remote surveillance

Surveillance from a remote location is possible by installing DVR Utility Software.

Exclusive software for DSR-5709P / DSR-5716P / DSR-5009PA / DSR-5016PA / DSR-3709PA / DSR-3716PA / DSR-3706PA* (*supplied separately)

CCTV system Management Software

VA-SW5000

See page 42, 44, 46, 47 for details.



Exclusive software for DSR-300P

Removable HDD Viewer Software

VA-SW300 (supplied separately)

See page 48 for details.

Exclusive software for DSR-M810PA / DSR-M814PA

DVR Utility Software

VA-SW8000

(sold separately)

See page 50 for details.



Monitor

LCD and Color CRT Monitor

VMC-L1019P
P.54VMC-L1017P
P.54VMC-L1015P
P.54VMC-8619PA
P.55VMC-8615FP
P.55

Lens

Lens for 1/3" CCD camera

VA-13FG04IR
P.31VA-13FG06IR
P.31VA-13FG08IR
P.31VA-13FG28IR
P.31VA-13VG2811ASIR
P.32VA-13VG308ASIR
P.32VA-13VG550T-LY
P.32VA-13VG308AS
P.32

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera · Lens

DVR

SSP System

Monitor

Example System



PAN-FOCUS

Technology in Perspective

Pan-focus lens can bring a broad area into focus, enabling the camera system to visualize everything in the field of view clearly at the same time. The lens also has a 2.6x zooming function. As a result, it allows a surveillance camera to capture a clear video image offering details of background objects.

520
TV Lines

Horizontal resolution

The SANYO camera delivers 520 TV lines.

The DSP (Digital Signal Processor) with a proprietary algorithm produces sharp outlines and natural color with no color smudges.

DAY NIGHT

24-hour surveillance is now possible with just a single camera that works as a color camera during the day and a high-sensitivity B/W camera during the night. The mode of operation is automatically switched by replacing the optical filter. The use of an optical filter in the color mode also allows video recording in true colors.

Minimum illumination
0.03 lx

Minimum subject illumination

The minimum illumination required for recognizing a subject is generally 2 to 6 lx for color cameras, and 0.03 lx for B/W cameras. Minimum subject illumination changes according to the F value of combined lenses. When F1.2 lenses and F1.4 lenses are combined with an F1.2 lens, minimum subject illumination is reduced, making monitoring possible in dark locations.

Illumination guidelines

100,000 to 5,000 lx

Outdoors with fine weather

5,000 lx

Fine weather in the shade, outdoors with cloud weather

1,500 to 750 lx

Shops, food counters, library reading rooms

200 to 100 lx

Hotel reception areas

75 to 30 lx

Car parks, warehouses

5 to 3 lx

Theater seating

2 to 1 lx

Hospitals at night

0.3 to 0.1 lx

Full moon

*Approximate values

Multi-spot / Center-zone BLC

Backlight compensation

When filming in directions with backlighting such as entrance ways or windows where the backlighting causes the subject to appear as a silhouette, this function automatically adjusts to the most appropriate aperture.

Without backlight compensation
Subject appears as a silhouette against bright background.



With backlight compensation
Subject appears clear and sharp

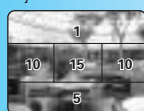


SANYO CCD cameras use four systems: center-zone photometry system, 5-section photometry mode setting, multi-spot photometry (48 / 64-section) systems and multi-spot masking.

With the **center-zone photometry** system, the brightness of the light measuring area is measured, and by automatic adjustment of the lens aperture, a clear and sharp image is possible even when the subject is backlit.

With this system, the light measuring area is in the center of the screen for an optimal image of the subject.

With the **5-section photometry** system, the screen is divided into 5 sections to which the user



An example of weight setting:
Top = 1, Bottom = 5, Left = 10, Right = 10, Center (fixed) = 15.
The size and position of the Center area is adjustable.

A Comprehensive Line-up of Multi-functional High Resolution Cameras Solves a Variety of Surveillance Needs

will assign 15-scale weights. The brightness of the picture will be kept at optimum by giving priority to the area with the higher weight. (A DC type auto-iris lens is required to enable this mode.)

With the **multi-spot photometry (48/64-section)** system, the screen is divided into 48 / 64 areas on which luminous intensity is measured separately to determine the lighting/backlight conditions of all objects. This makes it possible to apply optimum backlight compensation even for peripheral and moving objects.

With the **multi-spot masking (48-sections)** system, certain areas can be eliminated from the photometric measurement using a 48-section grid. The light intensity for the remaining area is measured and the image brightness is adjusted accordingly.



Areas in which illuminance will not be measured

ATW AWC Manual

White-balance (color cameras only)

Sometimes the color of clothes seen under lighting inside a shop appears different when viewed in sunlight outside. This is due to variation in the color temperature of the light source. The human eye is highly adaptable to variation in the color temperature of light sources so that even when the light source changes, white appears as white. But CCD adaptability is poor, and to reproduce unbalanced white when the light source changes, correction of the image signal is necessary. All SANYO color CCD cameras have TTL (Through The Lens) auto tracing white-balance, so even in a location with significant variation in color temperature of the light sources, such as next to a window, the image is automatically adjusted accordingly to achieve the best color.

Internal sync. External sync. Line lock

Synchronizing system

This is the timing used by the security camera when filming (synchronizing). There are sync systems that synchronize with the internal sync signal circuit (internal sync.), or that synchronize with a sync signal input to the security camera from outside (external sync.), or those that use the cycle of the camera's AC power to synchronize (line lock). When switching between several security cameras for surveillance using one monitor, synchronizing the cameras is necessary. For this, the line lock and external sync systems are used.

SSP

SSP (RS-485) compatible

By using SSP (SANYO Security Serial Protocol), cameras and DVRs can be controlled with just one controller over a daisy chain connection up to a maximum of 254 devices. The maximum cable length (total length of the daisy chain path) is 1200 m (4000 feet).

Electronic iris

Iris












The aperture that is adjusted to control the amount of light entering the lens depending on the lighting conditions. If the lighting is consistent, a fixed exposure is used; if the lighting fluctuates, auto-exposure uses is used.












24V AC 12V to 15V DC
220V to 230V










Power Sources

The power sources for driving the camera.

*Images used may differ slightly from actually recorded scenes.

Category	Speed Dome Camera				Network Dome Camera with PT mechanism		Dome Camera with PT mechanism		Dome Camera		Weatherproof Zoom Camera
Serial No.	 VCC-9800P Day/Night	 VCC-9700P	 VCC-9600P Day/Night	 VCC-9500P	 VDC-DPN9585P Day/Night	 VCC-PN9575P	 VDC-DP9585P Day/Night	 VCC-P9575P	 VDC-DP7585P Day/Night	 VCC-P7575PA	 VCC-XZ200P Day/Night
Lens	36x AF Zoom lens	36x AF Zoom lens	30x AF Zoom lens	30x AF Zoom lens	2.6x Pan-Focus lens	2.6x Pan-Focus lens	2.6x Pan-Focus lens	2.6x Pan-Focus lens	2.6x Pan-Focus lens	2.6x Pan-Focus lens	2.6x Pan-Focus lens
Color	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
B/W	✓	—	✓	—	✓	—	✓	—	✓	—	✓
CCD size	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
Horizontal resolution	520 TVL	520 TVL	520 TVL	520 TVL	520 TVL	520 TVL	520 TVL	520 TVL	520 TVL	520 TVL	520 TVL
Minimum illumination	50IRE	Color 1.0 lx B/W 0.05 lx	1.0 lx	Color 0.8 lx B/W 0.04 lx	0.8 lx	Color 1.2 lx B/W 0.06 lx	1.9 lx	Color 1.2 lx B/W 0.06 lx	1.9 lx	Color 1.2 lx B/W 0.06 lx	1.9 lx
	20IRE	Color 0.4 lx B/W 0.02 lx	0.4 lx	Color 0.32 lx B/W 0.016 lx	0.32 lx	Color 0.48 lx B/W 0.024 lx	0.76 lx	Color 0.48 lx B/W 0.024 lx	0.76 lx	Color 0.48 lx B/W 0.024 lx	0.76 lx
	F	F1.6	F1.6	F1.4	F1.4	F1.9	F1.9	F1.9	F1.9	F1.9	F1.9
Backlight compensation	Multi-spot 5-section	Multi-spot 5-section	Multi-spot 5-section	Multi-spot 5-section	Multi-spot Center-zone	Multi-spot Center-zone	Multi-spot Center-zone	Multi-spot Center-zone	Multi-spot Center-zone	Multi-spot Center-zone	Multi-spot Center-zone
White-balance	ATW / AWC Indoor / Outdoor Fluorescent / Manual	ATW / AWC Indoor / Outdoor Fluorescent / Manual	ATW / AWC Indoor / Outdoor Fluorescent / Manual	ATW / AWC Indoor / Outdoor Fluorescent / Manual	ATW / AWC Manual	ATW / AWC Manual	ATW / AWC Manual	ATW / AWC Manual	ATW / AWC Manual	ATW / AWC Manual	ATW / AWC Manual
Sync	Internal sync. Line lock	Internal sync. Line lock	Internal sync. Line lock	Internal sync. Line lock	Internal sync. Line lock	Internal sync. Line lock	Internal sync. Line lock	Internal sync. Line lock	Internal sync. Line lock	Internal sync. Line lock	Internal sync. Line lock
Power supply	24 V AC ±10% or 230 V AC ±10%	24 V AC ±10% or 230 V AC ±10%	24 V AC ±10% or 230 V AC ±10%	24 V AC ±10% or 230 V AC ±10%	24 V AC ±10% 12 V to 15 V DC	24 V AC ±10% 12 V to 15 V DC	24 V AC ±10% 12 V to 15 V DC	24 V AC ±10% 12 V to 15 V DC	24 V AC ±10% 12 V to 15 V DC	24 V AC ±10% 12 V to 15 V DC	24 V AC ±10% 12 V to 15 V DC
Page	7	7	8	8	11	11	14	15	16	16	18

Category	Weatherproof Zoom Camera	Zoom Camera		Vandal Resistant Dome Camera		Dome Camera	Wide Dynamic Range Camera	Color CCD Camera			
Serial No.	 VCC-XZ400P Day/Night	 VCC-ZM400P Day/Night	 VCC-ZM300PA	 VDC-W1595VP Day/Night	 VDC-D1585VP Day/Night	 VDC-C1575VP	 VCC-9615P	 VCC-WD8575P Day/Night	 VCC-4795P Day/Night	 VCC-4790P Day/Night	 VCC-6592P
Lens	22x AF Zoom lens	22x AF Zoom lens	22x AF Zoom lens	2.3x Vari-focal lens	2.3x Vari-focal lens	2.3x Vari-focal lens	2.3x Vari-focal lens	CS mount replaceable	CS mount replaceable	CS mount replaceable	CS mount replaceable
Color	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
B/W	✓	✓	—	—	✓	—	—	✓	✓	✓	—
CCD size	1/4"	1/4"	1/4"	1/3"	1/3"	1/3"	1/3"	1/3"	1/3"	1/3"	1/3"
Horizontal resolution	520 TVL	520 TVL	520 TVL	480 TVL	520 TVL	520 TVL	480 TVL	480 TVL	520 TVL	520 TVL	520 TVL
Minimum illumination	50IRE	Color 1.2 lx B/W 0.06 lx	Color 1.2 lx B/W 0.06 lx	2.0 lx	1.0 lx	Color 1.0 lx B/W 0.05 lx	1.0 lx	1.8 lx	Color 0.5 lx B/W 0.025 lx	Color 0.45 lx B/W 0.01 lx	Color 0.45 lx B/W 0.01 lx
	20IRE	Color 0.48 lx B/W 0.024 lx	Color 0.48 lx B/W 0.024 lx	0.8 lx	0.4 lx	Color 0.4 lx B/W 0.02 lx	0.4 lx	0.72 lx	Color 0.02 lx B/W 0.01 lx	Color 0.18 lx B/W 0.004 lx	Color 0.18 lx B/W 0.004 lx
	F	F1.6	F1.6	F1.6	F1.4	F1.4	F1.4	F1.6	F1.2	F1.2	F1.2
Backlight compensation	Multi-spot 5-section	Multi-spot 5-section	Multi-spot 5-section	—	ON/OFF	ON/OFF	Center-zone	5-section Center-zone	Multi-spot Center-zone	Multi-spot Center-zone	Multi-spot Center-zone
White-balance	ATW / AWC Manual	ATW / AWC Manual	ATW / AWC Manual	ATW / AWB	ATW / AWB	ATW / AWB	ATW Manual	ATW / AWC Indoor / Outdoor Fluorescent / Manual	ATW Manual	ATW Manual	ATW Manual
Sync	Internal sync. Line lock	Internal sync. Line lock	Internal sync. Line lock	Internal sync. Line lock (AC 24 V user)	Internal sync. Line lock (AC 24 V user)	Internal sync. Line lock (AC 24 V user)	Internal sync. Line lock	Internal sync. Line lock	Internal sync. Line lock	Internal sync. Line lock	Internal sync. External sync
Power supply	24 V AC ±10% 12 V to 15 V DC	24 V AC ±10% 12 V to 15 V DC	24 V AC ±10% 12 V to 15 V DC	24 V AC ±10% 12 V to 15 V DC	24 V AC ±10% 12 V to 15 V DC	24 V AC ±10% 12 V to 15 V DC	24 V AC ±10% 12 V to 15 V DC	24 V AC ±10% 12 V to 15 V DC	24 V AC ±10% 12 V to 15 V DC	24 V AC ±10% 12 V to 15 V DC	220 V to 230 V AC, 50Hz
Page	21	22	22	23	23	24	24	25	26	26	27

Category	Color CCD Camera					B/W CCD Camera				
Serial No.	 VCC-6585P	 VCC-6580P	 VCC-5885P	 VCC-4115PA	 VCC-4110P	 VCB-3385P	 VCB-3380P	 VCB-3455P	 VCB-3450P	
Lens	CS mount replaceable	CS mount replaceable	CS mount replaceable	CS mount replaceable	CS mount replaceable	CS mount replaceable	CS mount replaceable	CS mount replaceable	CS mount replaceable	
Color	✓	✓	✓	✓	✓	—	—	—	—	
B/W	—	—	—	—	—	✓	✓	✓	✓	
CCD size	1/3"	1/3"	1/3"	1/4"	1/4"	1/3"	1/3"	1/3"	1/3"	
Horizontal resolution	520 TVL	520 TVL	520 TVL	350 TVL	350 TVL	570TVL	570 TVL	400 TVL	400 TVL	
Minimum illumination	50IRE	0.5 lx	0.5 lx	1.0 lx	0.3 lx	0.3 lx	0.07 lx	0.07 lx	0.05 lx	
	20IRE	0.2 lx	0.2 lx	0.4 lx	0.12 lx	0.12 lx	0.028 lx	0.028 lx	0.02 lx	
	F	F1.2	F1.2	F1.2	F1.2	F1.2	F1.2	F1.2	F1.2	
Backlight compensation	Multi-spot Center-zone	Multi-spot Center-zone	Center-zone	Multi-spot Center-zone	Multi-spot Center-zone	Center-zone	Center-zone	Center-zone	Center-zone	
White-balance	ATW Manual	ATW Manual	ATW	ATW Manual	ATW Manual	—	—	—	—	
Sync	Internal sync. Line lock	Internal sync. Line lock	Internal sync. Line lock	Internal sync. Line lock	Internal sync. Line lock	Internal sync. External sync Line lock	Internal sync. Line lock	Internal sync. Line lock	Internal sync. Line lock	
Power supply	24 V AC ±10% 12 V to 15 V DC	220 V to 230 V AC, 50Hz	24 V AC ±10% 12 V to 15 V DC	24 V AC ±10% 12 V to 15 V DC	220 V to 230 V AC, 50Hz	24 V AC ±10% 12 V to 15 V DC	220 V to 230 V AC	24 V AC ±10% 12 V to 15 V DC	220 V to 230 V AC, 50Hz	
Page	27	28	28	29	29	30	30	30	30	

*Multi-spot= Multi-spot photometry system *5-section =5-section photometry system *Multi-spot mask = Multi-spot masking system

NOTE: Specifications subject to change without notice

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera - Lens

DVR

SSP System

Monitor

Example System

1/4" Color CCD High-resolution
AF Speed Dome Camera

VCC-9800P series

DAY NIGHT

36x
Optical Zoom



(Surface type)

520
TV Lines

Minimum
illumination
0.05 lx

Multi-spot/
5-section
BLC

ATW
AWC
Manual

Internal sync.
Line lock

Electronic
shutter

SSP
(Network)
Option

24V AC
or 230 V

AF Zoom
lens

Pelco-D
Support

1/4" Color CCD High-resolution
AF Speed Dome Camera

VCC-9700P series

36x
Optical Zoom



(Surface type)

520
TV Lines

Minimum
illumination
1.0 lx

Multi-spot/
5-section
BLC

ATW
AWC
Manual

Internal sync.
Line lock

Electronic
shutter

SSP
(Network)
Option

24V AC
or 230 V

AF Zoom
lens

Pelco-D
Support

High-speed Panning of 435°/sec

The camera makes it possible to capture the image of exact point of surveillance with high-speed panning of 435°/sec between preset positions. This accurate mechanism is capable of capturing quickly moving objects and objects approaching the camera when it is zoomed in.

Pan / Tilt speed	Pan	Max. 435°/sec.
	Tilt	Max. 400°/sec.
	Manual pan / tilt	0.1 to 120°/sec.

Preset Accuracy to ±0.014 (typical) of a Degree

In the case of a speed dome camera, the motorized drive's performance is vital in order to capture numerous points of surveillance during lens movement and zoom-ratio changes. SANYO's new series of speed dome cameras keeps the accuracy of the camera's return to preset points to within 0.014 (typical) of a degree for precision capture of images from surveillance.



Designated point set using
preset position function



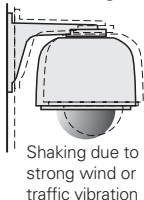
Image from conventional
camera* with error margin
as large as 0.2°
*VCC-9400P/9300P cameras



Error margin of designated
point is a mere 0.014°
(typical)

Vibration Compensation (VCC-9800P / VCC-9700P)

Blurs due to vibration of the camera can be electronically removed. It is also possible to correct blurs only, while continuing the camera movement such as pan and tilt.



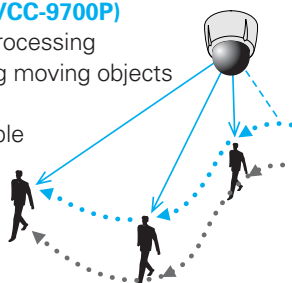
Without image stabilization



With image stabilization

Automatic Tracing (VCC-9800P / VCC-9700P)

The camera comes with an image processing algorithm that is capable of detecting moving objects on the screen and tracing an object automatically. When there are multiple movements, an object with the biggest move will be traced. Further settings are available according to the pattern of movement.



Optimum Auto Focus

Further development of conventional auto-focus functions has resulted in not only shorter focus times, but also the added capability of remaining clearly focused on a targeted subject in front of the camera, even when other elements are passing in and out of the field of view. And with optimum focus, images remain in focus, even when the lens is in motion during pan/tilt operation.

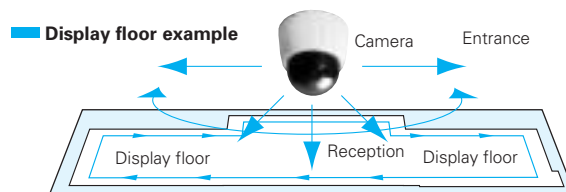
Maximum 576x Zoom Function 36x Optical Zoom and 16x Digital Zoom (VCC-9800P / VCC-9700P)

The 36x optical zoom and 16x digital zoom can be combined for a close-up of 576x. This allows even distant subjects to be checked in detail, allowing one camera to monitor a wide area.



Up to 256 Preset Positions (VCC-9800P / VCC-9700P)

The user can set up to 256 preset positions with VCC-9800P / VCC-9700P and up to 128 preset positions with VCC-9600P / VCC-9500P. Preset positions can be set to any angle from directly below the camera to the horizontal position, facing any direction in the adjustable range of the lens, to offer the capability to capture the image of any surveillance area. When manually operated, the lens can be moved at the speed of 0.1 °/sec to 120 °/sec for accurate tracking of moving objects.



Four Types of Auto Mode Setting

Sequence, Tour, Auto Pan and Auto return modes are available.

1/4" Color CCD High-resolution
AF Speed Dome Camera

VCC-9600P series

DAY NIGHT

30x
Optical Zoom



(Surface type)

520
TV Lines

Minimum
illumination
0.04 lx

Multi-spot/
5-section
BLC

ATW
AWC
Manual

Internal sync.
Line lock

Electronic
shutter

SSP
(Network)
Option

24V AC
or 230 V

AF Zoom
lens

Pelco-D
Support

1/4" Color CCD High-resolution
AF Speed Dome Camera

VCC-9500P series

30x
Optical Zoom



(Surface type)

520
TV Lines

Minimum
illumination
0.8 lx

Multi-spot/
5-section
BLC

ATW
AWC
Manual

Internal sync.
Line lock

Electronic
shutter

SSP
(Network)
Option

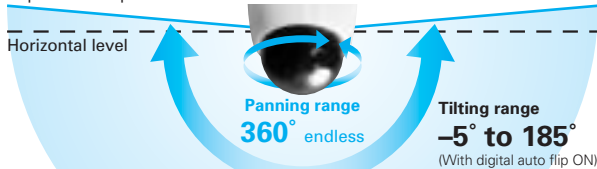
24V AC
or 230 V

AF Zoom
lens

Pelco-D
Support

Upward Surveillance Enabled PTZ Operation

In addition to endless 360°/sec panning, the camera's lens section enables 185°/sec tilting in the vertical plane for an area of surveillance expanded by 5° (indoor applications only) compared to previous models.



No dead areas with new speed dome cameras

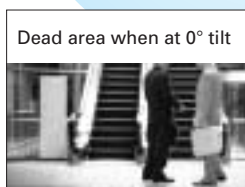


Image from conventional camera* at 0° tilt
*VCC-9400P / 9300P cameras



Upward tilt to 5° past zero for an expanded area of surveillance with VCC-9800P / 9700P / 9600P / 9500P cameras

Available in Three Forms, Outdoor Type, Surface Type or In ceiling Type

The camera is available in three different styles. Assemble them with different fittings and covers to make a camera most suitable for your surveillance needs.

All around Privacy Masking

When there is a house, or even a window, within the camera frame, it is possible to mask the area so that it will not appear on the monitor screen to protect other people's privacy. Up to 24 rectangular masks of arbitrary size (rectangle) can be set.



Coaxial Control or RS-485

Coaxial control: SSP / H-SSP / PELCO-C

RS-485: SSP / H-SSP / PELCO-D

*Other protocols are now under development.

SSP (RS-485) Compatible

By using SSP (SANYO Security Serial Protocol), cameras and DVRs can be controlled with just one controller over a daisy chain connection up to a maximum of 254 devices. The maximum cable length (total length of the daisy chain path) is 1200 m (4000 feet).

Camera Control Unit VAC-70 (sold separately)

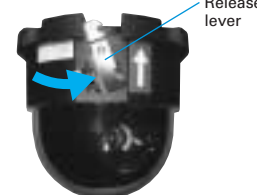
Remote set-up provides users with the feeling that they have the camera right beside their monitor. Capable of setting up VCC-9800P / VCC-9700P / VCC-9600P / VCC-9500P for all on-screen menu items (intelligent digital motion detector, backlight compensation, white-balance, etc.)

*See page 33 for details.

Easy-to-Manage Installation, Setup and Adjustment

Enclosed within the housing are an integrated lens, a motor and a pan/tilt mechanism. Attachment to the power supply base by simply sliding the release levers simplifies installation at the point of surveillance. The settings circuit board is detachable for access to protocol, address and other switch settings.

Detachable without disconnecting power cable

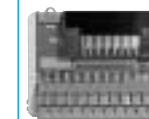


Slide the camera unit's two release levers and lock the power supply base into position. No special tools required for camera unit installation or removal.

Detachable Settings Circuit Board

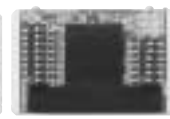
Basic camera settings can be made while holding the settings circuit board in hand, as the board is detachable from the power supply base. The I/O side of the board features 8 input and 2 output terminals for alarm signals.

Terminal side (Side-A)



Alarm inputs (8)
Alarm outputs (2)
RS-485A/RS-485B

DIP switch side (Side-B)



Address setting
Baud rate setting
RS-485/Coax setting
SSP/Pelco setting
Termination setting

JPEG Network board VA-80LAN

(sold separately)

JPEG/H.264 Network board VA-82LAN

(sold separately) See page 20 for details. **Coming soon**

This expansion board for network connection enables SANYO VCC-9800P / VCC-9700P / VCC-9600P / VCC-9500P to connect to a network. The user can operate a network connected camera using a web browser (Internet Explorer). It comes with the VA-SW3050LITE viewer software.

Network Recorder VA-SW3050 (sold separately)

See page 20 for details.

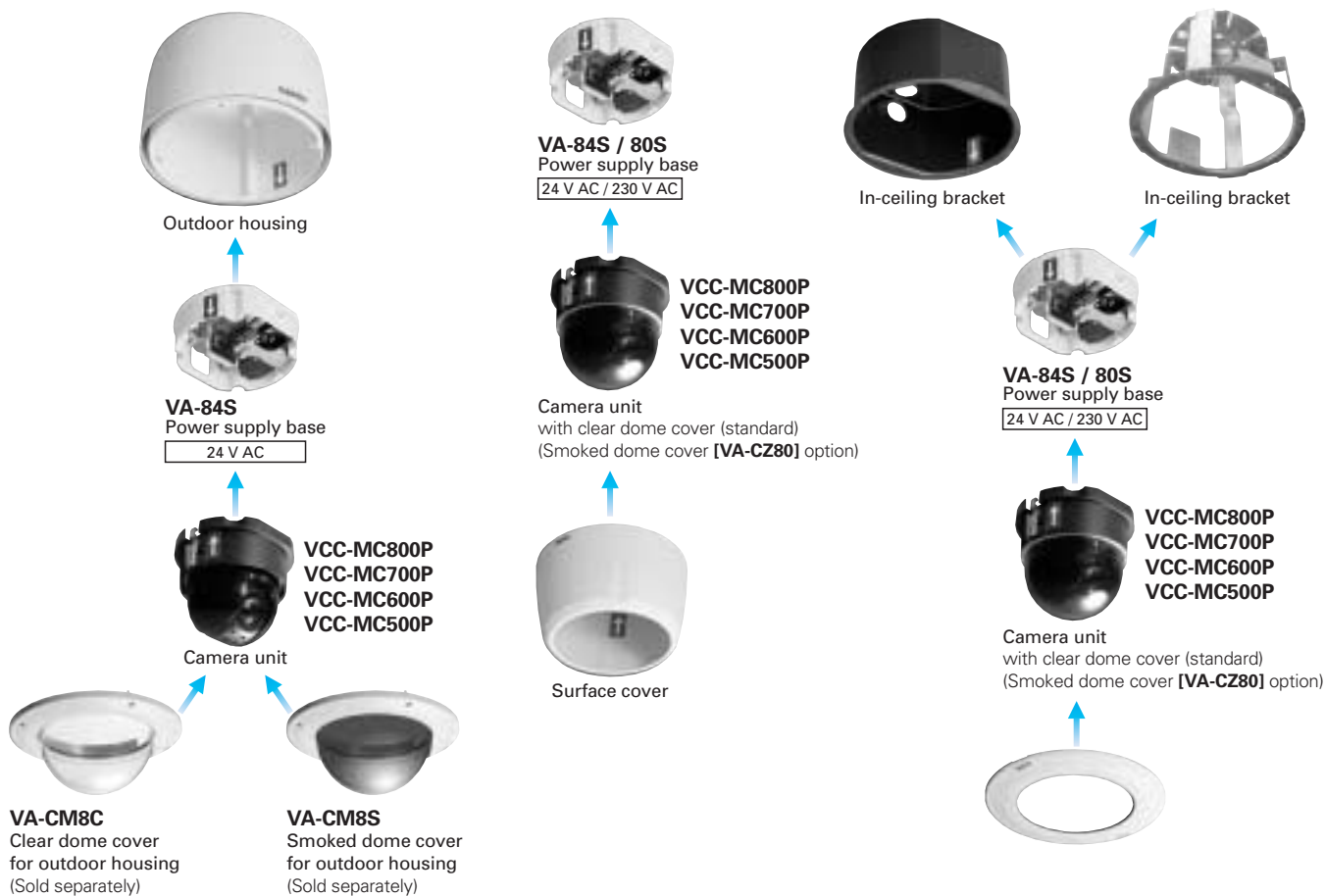
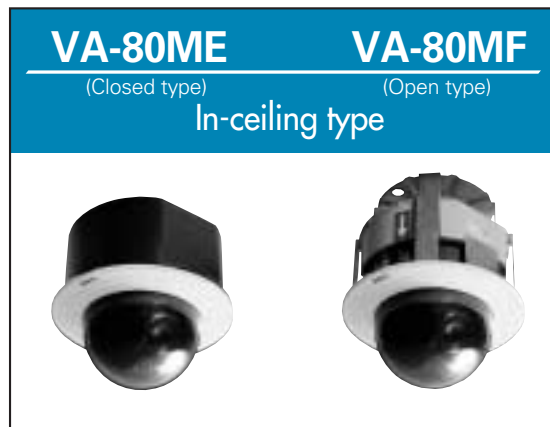
Applications

Available in Three Different Packages

Outdoor, Surface, or In-ceiling — Select a combination that matches your needs!

The combination of camera units and options allows the user to create tailor-made solutions. It also simplifies the installation.

System Chart
Specialty Camera
Network Camera
Pan-focus Camera
Camera · Lens
DVR
SSP System
Monitor
Example System



Model number codes

Model configurations example

Model name	Camera unit + Power basement + Housing + Dome cover
VCC-9800EXCP	VCC-MC800P + VA-84S + VA-80EX + VA-CM8C
VCC-9530EFCP	VCC-MC500P + VA-80S + VA-80MF
VCC-9700INSP	VCC-MC700P + VA-84S + VA-80F + VA-CZ80

Camera type	Housing type
36x, Day/night 8	I N Surface cover
36x, Color 7	E M In-ceiling (closed)
30x, Day/night 6	E F In-ceiling (open)
30x, Color 5	E X Outdoor housing
VCC-9	P PAL
Power	C Dome cover
AC230V 3 0	S Clear cover
AC24V 0 0	S Smoked cover

Dimensions Unit: mm

Camera Unit/Power Supply Base		Housings (Sold separately)				
		VA-80EX 24 V AC Outdoor Housing 	VA-80F Surface Cover 	VA-80ME In-Ceiling Bracket (closed type) 		
		VA-CM8C Clear dome cover for outdoor housing	VA-CM8S Smoked dome cover for outdoor housing	VA-CZ80 Smoked dome cover for indoor housing	VA-80MF In-Ceiling Bracket (open type) 	
Mounting Brackets (Sold separately)						
VA-80BP Pendant Mounting Bracket 	VA-80BW Wall Mounting Bracket 	VA-80A Attachment 	VA-80AC Corner Mounting Adaptor 	VA-80AP Pole Mounting Adaptor 		

MODEL		VCC-9800P series	VCC-9700P series	VCC-9600P series	VCC-9500P series
Scanning system		PAL standard 625 lines, 50 fields/sec.			
Image sensor		1/4" (approx. 3.6 mm x 2.7 mm) interline transfer method CCD			
Picture elements		Total: 795(H) x 596(V), Effective: 752(H) x 582(V)			
Horizontal resolution		520 TV lines			
Minimum illumination 50 IRE (approx.)		1.0 lx (at F1.6 GAIN: HIGH color mode) 0.05 lx, (at F1.6 B/W mode)	1.0 lx (at F1.6 GAIN: HIGH color mode)	0.8 lx (at F1.4 GAIN: HIGH color mode) 0.04 lx, (at F1.4 B/W mode)	0.8 lx (at F1.4 GAIN: HIGH color mode)
	20 IRE	0.4 lx (at F1.6 GAIN: HIGH color mode) 0.02 lx, (at F1.6 B/W mode)	0.4 lx (at F1.6 GAIN: HIGH color mode)	0.32 lx (at F1.4 GAIN: HIGH color mode) 0.016 lx, (at F1.4 B/W mode)	0.32 lx (at F1.4 GAIN: HIGH color mode)
Electronic sensitivity boost		Auto (interlocked with auto iris), up to 32x / OFF			
Video S/N ratio		More than 50 dB (AGC OFF)			
Backlight compensation		ON / OFF — Slide SW, ON = Multi-spot photometry (48-section) / 5-section photometry / Multi-spot masking (48-section)			
White-balance		ATW / AWC / Manual / Outdoor / Indoor / Fluorescent			
Gain control		Low / Normal / Middle / High / Off			
Electronic shutter		High-speed mode: 8 steps: 1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 Low-speed mode: 5 steps: 2x, 4x, 8x, 16x, 32x (1/25, 1/12, 1/6, 1/3, 1/1.5)			
Zoom lens		36x optical zoom, f = 3.4 to 122.4 mm, (F1.6 to 4.5) ON / OFF, up to 16x electronic zoom (Max. x560 combined with optical zoom)		30x optical zoom, f = 3.5 to 105 mm, (F1.4 to 3.7) ON / OFF, up to 16x electronic zoom (Max. 480x combined with optical zoom)	
Movement range	Panning	360° endless			
	Tilting	-5 to 185° (Digital auto flip ON)			
Movement speed	Panning	Preset: 435°/sec, Manual: 0.1 to 120°/sec			
	Tilting	Preset: 400°/sec, Manual: 0.1 to 120°/sec			
Motion detector		On (PRESET, ZONE) / Off: Motion zoom function			
Privacy masking		On / Off: Max. 24 masked locations (Wide view screen; 1 screen max. 4 masks) All-around privacy masking			
Synchronizing system		Internal sync. / Line lock (LINE PHASE)			
V phase adjustment		LINE PHASE			
Communication		RS-485 / Coaxial control (SSP)			
Protocols		SANYO, Pelco-D, Other (T.B.D)			
Environmental conditions	Temperature	-10°C to 50°C [+14°F to 122°F], -30°C to 50°C [-22°F to 122°F] when the outdoor housing, VA-80EX is used			
	Humidity	30% to 90% RH			
Power requirement		24 V AC ±10% 50Hz or 230 V AC, 50Hz			
Power consumption (approx.)	Camera unit + Power supply base	16 W: VCC-MC800P + VA-84S 17 W: VCC-MC800P + VA-80S	16 W: VCC-MC700P + VA-84S 17 W: VCC-MC700P + VA-80S	16 W: VCC-MC600P + VA-84S 17 W: VCC-MC600P + VA-80S	16 W: VCC-MC500P + VA-84S 17 W: VCC-MC500P + VA-80S
	Outdoor housing	35 W: VA-80EX			
Weight (approx.)	Outdoor type	5.1kg=VCC-9800EXCP/9800EXSP VCC-9830EXCP/9830EXSP	5.1kg=VCC-9700EXCP/9700EXSP VCC-9730EXCP/9730EXSP	5.1kg=VCC-9600EXCP/9600EXSP VCC-9630EXCP/9630EXSP	5.1kg=VCC-9500EXCP/9600EXSP VCC-9530EXCP/9630EXSP
	Surface type	2.4kg=VCC-9800INP VCC-9830INP	2.4kg=VCC-9700INP VCC-9730INP	2.4kg=VCC-9600INP VCC-9630INP	2.4kg=VCC-9500INP VCC-9530INP
	In-ceiling type	3.4kg=VCC-9800EMP VCC-9830EMP 2.7kg=VCC-9800EFP VCC-9830EFP	3.4kg=VCC-9700EMP VCC-9730EMP 2.7kg=VCC-9700EFP VCC-9730EFP	3.4kg=VCC-9600EMP VCC-9630EMP 2.7kg=VCC-9600EFP VCC-9630EFP	3.4kg=VCC-9500EMP VCC-9530EMP 2.7kg=VCC-9500EFP VCC-9530EFP

NOTE: Specifications subject to change without notice

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera · Lens

DVR

SSP System

Monitor

Example System

1/4" Color CCD High-resolution Vandal Resistant PT Network Dome Camera VDC-DPN9585P



PAN-FOCUS
Technology in Perspective

DAY NIGHT

2.6x
Optical Zoom

PoE
compatible

(Audio)
Communication

Network



JPEG

Minimum
illumination
0.06 lx

Multi-spot /
Center-zone
BLC

PT
mechanism

720 x 286,
640 x 480
360 x 286,
180 x 143

25 IPS

Alarm IN x 2
Alarm OUT x 1

24V AC
12V to
15V DC

Zoom
Pan-focus
auto iris lens

IP66

1/4" Color CCD High-resolution PT Indoor mini Network Dome Camera VCC-PN9575P



PAN-FOCUS
Technology in Perspective

2.6x
Optical Zoom

PoE
compatible

(Audio)
Communication

Network



JPEG

Minimum
illumination
1.9 lx

Multi-spot /
Center-zone
BLC

PT
mechanism

720 x 286,
640 x 480
360 x 286,
180 x 143

25 IPS

Alarm IN x 2
Alarm OUT x 1

24V AC
12V to
15V DC

Zoom
Pan-focus
auto iris lens

SANYO proposes the 2.6x pan-focus lens to offer a focused view of a broader area

With a vari-focal lens, objects that are in front of or behind the focus point are blurred. To eliminate this problem, a new technology was developed to increase the depth of field so that everything in the field of view is in focus at the same time. SANYO has been one of the leaders in the development of this technology and has successfully commercialized the 2.6x pan-focus lens that offers an image with greater depth of field. The new lens makes it possible to capture a clear image of objects in the background.

Privacy Masking (Up to 8 Masks)

When there is a house or even an object as small as a window within the camera frame, it is possible to mask the area so that it will not appear on the monitor screen to protect other people's privacy. Up to 8 rectangular masks of arbitrary size can be set. These masking areas may be protected with a four-digit (max.) password.



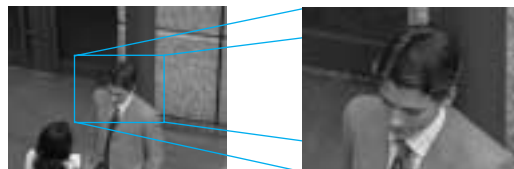
PTZ Operations over a Network

Both VDC-DPN9585P and VCC-PN9575P come with a PT mechanism and allow panning of 335 degrees (55 degrees*) and tilting of 90 degrees (90 degrees*) to reduce blind spots in the surveillance area. When particular angles are preset on the camera (up to sixteen points), it moves to each position quickly at the speed of 120°/sec max. for both panning and tilting. Combining these features with the motion detector, it is possible to catch all actions taking place in the area.

* For wall-mounted cameras

Flexible Motion Detector

The Flexible Motion Detector enables reliable and accurate motion detection by analyzing the magnitude of movement and the size of object from changes in picture brightness. When a moving object is detected, VDC-DPN9585P / VCC-PN9575P can send an alarm signal to external units and/or switch to the optical zoom mode that can be preset either to 1.0x, 1.4x, 2.0x, or 2.6x zoom.



SANYO Security Systems for the Creation of a Full-fledged LAN or Internet

Video captured by camera can be viewed using the bundled VA-SW3050LITE viewer software. Use of the VA-SW3050 archiving software (sold separately) allows simultaneous monitoring of streams from up to 128 cameras as well as recording of live audio and video data.

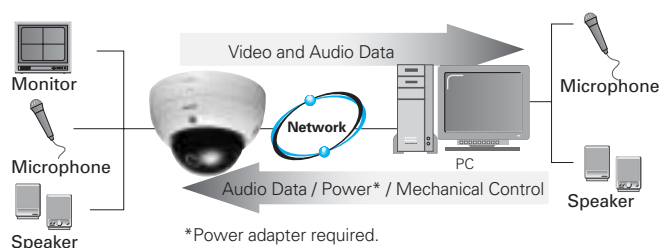
*Use of the VDC-DPN9585P's or the VCC-PN9575P's built-in networking features allows viewing of video from a single camera with a generic web browser (Internet Explorer).

Power-over-Ethernet (PoE)

Both VDC-DPN9585P and VCC-PN9575P support the IEEE 802.3af standard for Power-over-Ethernet (PoE) applications to allow power supplied over LAN cabling. In addition to making installation easier, this allows camera installation in places where it would otherwise be difficult to secure a power source.

Surveillance-Point Monitoring with Video and Audio Data

The VDC-DPN9585P and VCC-PN9575P are equipped to enable two-way voice communications via audio signals sent between cameras and PCs. Transmission of crystal clear images together with audio offers those overseeing surveillance as a sense of being right there at the scene.

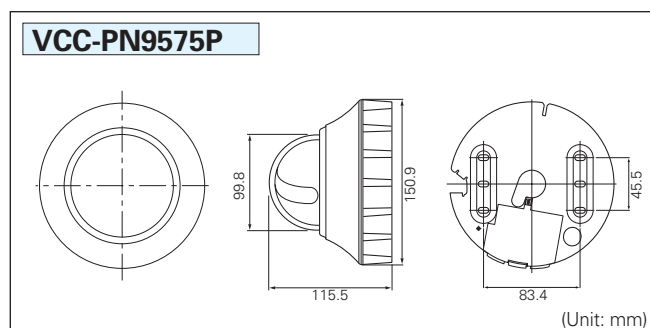
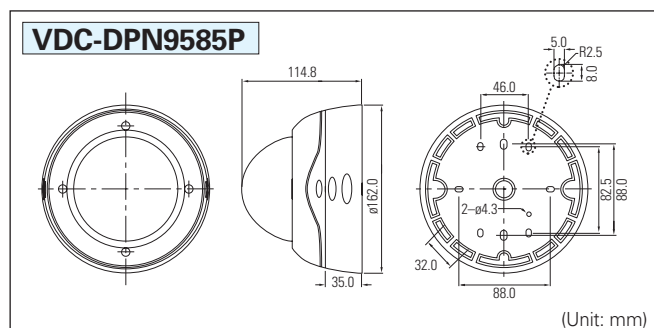


Easy Setup with an On-screen Menu

The VDC-DPN9585P and VCC-PN9575P offers an on-screen menu for setting up the camera any desired way.

Operation on PoE, AC or DC Power Sources

The VDC-DPN9585P and VCC-PN9575P can operate on PoE, 12 V DC (12 V to 15 V DC) or 24 V AC (60 Hz, and even at a tolerance of $\pm 10\%$). Switching to the correct mode occurs automatically when power is supplied.



MODEL	VDC-DPN9585P	VCC-PN9575P
Scanning system	PAL standard 625 lines, 50 fields/sec.	
Image sensor	1/4" (approx. 3.6 mm x 2.7 mm) interline transfer method CCD	
Picture elements	Total: 795(H) x 596(V), Effective: 752(H) x 582(V)	
Horizontal resolution	More than 520 TV lines (Analog video signal)	
Minimum illumination (approx.)	50IRE 0.06 lx at max. AGC, with F1.9 lens, B/W mode 1.2 lx at max. AGC, with F1.9 lens, Color mode 20IRE 0.024 lx at max. AGC, with F1.9 lens, B/W mode 0.48 lx at max. AGC, with F1.9 lens, Color mode	1.9 lx at max. AGC, with F1.9 lens, Color mode 0.76 lx at max. AGC, with F1.9 lens, Color mode
Video output level	1.0 V (p-p) (75 Ω , composite)	
Video S/N ratio	More than 50 dB (AGC OFF)	
Backlight compensation	ON / OFF — Slide SW, ON = Multi-spot photometry (64-section) / Center-zone photometry	
Day/Night	Auto (High/Low)	
White-balance	ATW / AWC / Manual (MWB) / Outdoor (3200) / Indoor (5600) / Fluorescent (FLUO)	
Gain control	High / Normal / OFF	
Motion detector	ON / OFF, Motion zoom function	
Privacy masking	ON / OFF 8 masking	
Electronic shutter	1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec.	
Lens	Built-in 2.6x motorized zoom pan-focus auto iris lens, f = 2.8 to 7.3mm (2.6x), F1.9 to 3.0	
Depth of field	Focus range: 1 m to ∞	
Synchronizing system	Internal sync. / Line lock	
Aperture	HIGH PLUS / HIGH / NORMAL / OFF	
Auto mode	Sequential pan / Auto pan	
Rotation range	Ceiling Panning: max. 0 to 335 deg, Tilting: 0 to 90 deg. Wall Panning: ± 55 deg, Tilting: 0 to 90 deg	
Rotation speed	Preset Panning: max. 120 deg / second (preset) Manual 50 to 100 deg / second (preset)	
Preset position setting	16	
Communications	Simplified controller (VAC-70: separately ordered) supported	
Audio compression method	G. 711 (192 Kbps), full duplex	
Microphone input	-62 to -32 dB (monaural microphone) 3.5mm mini jack	
Alarm input	External x 2, NO / NC selectable, Alarm preset function, Alarm zoom function	
Alarm output	External x 2, NO / NC selectable	
Environmental conditions	Temperature: -10°C to 50°C [+14°F to 122°F], -30°C to 50°C [-22°F to 122°F] When heater (VA-50H: option board) is used with power source connected Humidity: within 90% RH	Temperature: -10°C to 40°C [+14°F to 104°F] Humidity: within 90% RH
Enclosure rating	IP66	
Power requirement	24V AC $\pm 10\%$, 50 Hz or 12 V to 15 V DC, supplied through PoE (compliant with IEEE 802.3af)	
Power consumption (approx.)	10 W Max. 15.5 W When heater (VA-50H: option board) turned on	10 W
AC Adaptor	Not included	
Dimensions (approx.)	$\phi 162 \times 114.8$ mm [$\phi 6.4 \times 3.8$ in.]	$\phi 150.9 \times 115.5$ mm [$\phi 6.0 \times 4.5$ in.]
Weight (approx.)	1.5 kg [53.6 oz.]	650g [22.9 oz.]

NOTE: Specifications subject to change without notice

Network		
MODEL	VDC-DPN9585P	VCC-PN9575P
Image compression	JPEG	
Resolution	720 x 286, 640 x 480 (disabled during voice communications), 360 x 286, 180 x 143	
Picture quality	5 levels	
Frame rate	Max. 25 IPS (720 x 240)	
Audio compression method	G.711 (192 Kbps), full duplex	
Microphone	-62 to -32 dB (monaural microphone) 3.5mm mini jack	
Input		
External	Internal or external selected	
Internal		
Audio output	LINE OUT monaural audio output, maximum -8 dB, 3.5mm mini jack	
Bandwidth	128, 256, 512 Kbps, 1, 2, 3, 4 Mbps, no limitation	
Alarm buffer	Up to 8 MB; configurable	
Interface	10BASE-T / 100BASE-TX (RJ-45 connector)	
PoE support	Compliant with IEEE 802.3af	
Protocols	TCP, UDP, HTTP, HTTPS, SMTP, NTP, DHCP, FTP, UPnP	
Simultaneous access capacity	Image: Maximum 16, Voice: Maximum 16 (admin: 1)	
Security	BASIC authentication (ID/password), SSL supported (image only)	
Bundled software	VA-SW3050LITE	

Network Recorder VA-SW3050

(sold separately)
See page 20 for details.

Camera Control Unit VAC-70

(sold separately)
See page 33 for details.

Heater board VA-50H

(sold separately) for VDC-DPN9585P

The heater board protects the camera from cold weather. It allows the camera to operate at temperatures as low as -30°C. (24 V AC only)

Smoked Cover VCZ-50

(sold separately)
for VCC-PN9575P



Half-Mirror Cover VCZ-51

(sold separately)
for VCC-PN9575P



System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera - Lens

DVR

SSP System

Monitor

Example System



PAN-FOCUS

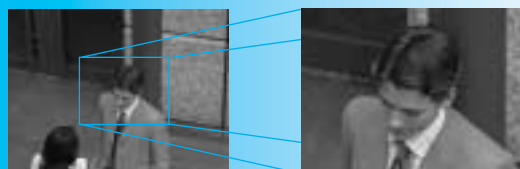
Technology in Perspective

520_{TVL}

The SANYO camera delivers 520 TV lines. The DSP (Digital Signal Processor) with a proprietary algorithm produces sharp outlines and natural color with no color smudges.

Built-in Intelligent Motion Detector and Intelligent Zoom Detector

The Intelligent Motion Detector enables reliable and accurate motion detection by analyzing the magnitude of movement and the size of object from changes in picture brightness. When a moving object is detected, SANYO's camera can send an alarm signal via SSP or network and/or switch to the optical zoom mode that can be preset either to 1.0x, 1.4x, 2.0x, or 2.6x zoom.



2.6x zoom

By adopting New Technology, SANYO has Developed a Pan-focus lens camera which offers better functionality with a clearer image for a broader area.

SANYO proposes the 2.6x pan-focus lens to offer a focused view of a broader area

With a vari-focal lens, objects that are in front of or behind the focus point are blurred. To eliminate this problem, a new technology was developed to increase the depth of field so that everything in the field of view is in focus at the same time. SANYO has been one of the leaders in the development of this technology and has successfully commercialized the 2.6x pan-focus lens that offers an image with greater depth of field. The new lens makes it possible to capture a clear image of objects in the background.








Image with a pan-focus lens

- Clear focusing on all shooting area with great depth of field (D.O.F.)
- No focus adjustments
- Remote zoom adjustment by camera control unit, VAC-70



Image with a vari-focal lens

- Clear focusing to a specific area
- Manual focus adjustments
- Manual view angle adjustments

Category	Dome Camera with PT mechanism		Dome Camera		Weatherproof Zoom Camera
Model No.	 VDC-DP9585P	 VCC-P9575P	 VDC-DP7585P	 VCC-P7575PA	 VCC-XZ200P
Weatherproof, IP66	✓	—	✓	—	✓
PT mechanism	✓	✓	—	—	—
Vandal Resistant Camera	✓	—	✓	—	—
Network	—	—	Option (VA-50LAN or VA-51LAN)	Option (VA-50LAN or VA-51LAN)	Option (VA-20LAN)
PoE (Power over Ethernet)	—	—	Option (VA-51LAN)	Option (VA-51LAN)	—
Audio	—	—	Option (VA-51LAN)	Option (VA-51LAN)	—
Day/Night	✓	—	✓	—	✓
Minimum illumination (F1.9)	50IRE	Color 1.2 lx B/W 0.06 lx	1.9 lx	Color 1.2 lx B/W 0.06 lx	1.9 lx
	20IRE	Color 0.48 lx B/W 0.024 lx	0.76 lx	Color 0.48 lx B/W 0.024 lx	0.76 lx
Option	Network board	—	—	VA-50LAN VA-51LAN	VA-20LAN
	SSP+Twisted pair board	VA-50ST Built-in	VA-50ST Built-in	VA-50ST	VA-20ST
	Heater board	VA-50H	—	VA-50H	VA-50H
	Smoked Cover	—	VCZ-50	—	VCZ-50
	Half-Mirror Cover	—	VCZ-51	—	VCZ-51
Page	14	15	16	16	18

NOTE: Network board and the Twisted pair board cannot be used concurrently.

1/4" Color CCD High-resolution
Vandal-resistant PT Dome Camera

VDC-DP9585P

PAN-FOCUS
Technology in Perspective

DAY NIGHT

2.6x
Optical Zoom

NVT
300C



520
TV Lines

Minimum
illumination
0.06 lx

Multi-spot /
Center-zone
BLC

PT
mechanism

Internal sync.
Line lock

Electronic
shutter

SSP

24V AC
12V to
15V DC

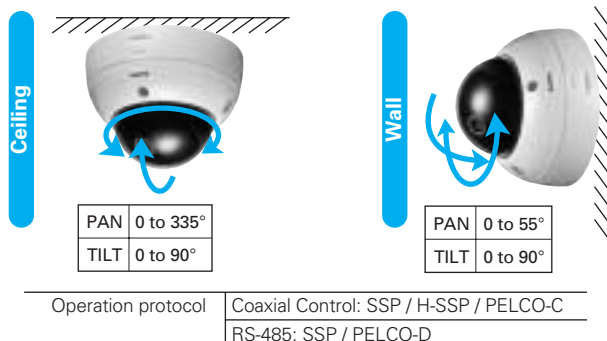
NVT
UTP video

IP66

PTZ Operations

VDC-DP9585P comes with a PT mechanism and allow panning of 335 degrees (55 degrees*) and tilting of 90 degrees (90 degrees*) to reduce blind spots in the surveillance area. When particular angles are preset on the camera (up to sixteen points), it moves to each position quickly at the speed of 120 deg/sec max. for both panning and tilting. Combining these features with the motion detector, it is possible to catch all actions taking place in the area.

* For wall-mounted cameras

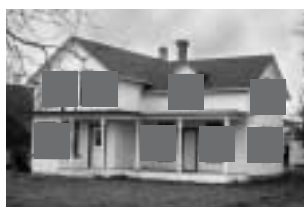


High sensitivity minimum required illumination

Minimum required illumination is an impressive 0.06 lx at F1.9 in B/W mode and 1.2 lx at F1.9 in color mode.

Privacy Masking

When there is a house or even an object as small as a window within the camera frame, it is possible to mask the area so that it will not appear on the monitor screen to protect other's privacy. Up to 8 rectangular masks of arbitrary size can be set. These masking areas may be protected with a 4-digit (max.) password.



Twisted pair terminal (CAT5)

Twisted pair terminal (CAT5) for video signal:



NVT built-in UTP video

Tough, Impact-resistant Body

The IP66 compliant weatherproof enclosure can resist tampering by intruders. The drip-proof finishing makes it suitable for outdoor installations.

Built-in Electronic Shutter

A high-speed electronic shutter that is internally switchable for eight modes using a DIP switch allows adjustment increments from 1/50 to 1/10000 sec.

AC / DC Power Source Compatibility

VDC-DP9585P come with power supply terminals of 24 V AC and 12 V to 15 V DC. Select an appropriate source, depending on the location.

Camera Control Unit VAC-70 (sold separately)

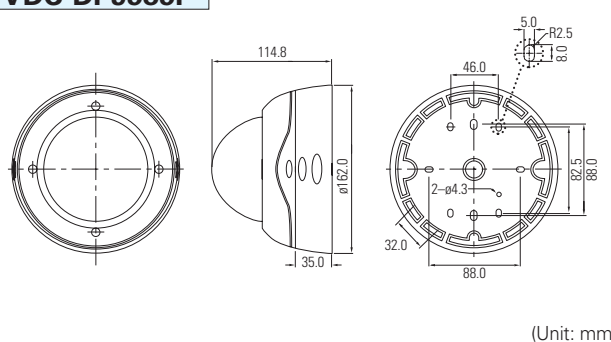
Remote set-up provides users with the feeling that they have the camera right beside their monitor. Capable of setting up VDC-DP9585P for all on-screen menu items (intelligent digital motion detector, backlight compensation, white-balance, etc.)

Camera Control Unit VAC-70

(sold separately) See page 33 for details.



VDC-DP9585P



(Unit: mm)

MODEL	VDC-DP9585P
Scanning system	PAL standard 625 lines, 50 fields/sec.
Image sensor	1/4" (approx. 3.6 mm x 2.7 mm) interline transfer method CCD
Picture elements	Total: 795(H) x 596(V), Effective: 752(H) x 582(V)
Horizontal resolution	More than 520 TV lines
Minimum illumination (approx.)	0.06 lx at max. AGC, with F1.9 lens, B/W mode 1.2 lx at max. AGC, with F1.9 lens, Color mode 0.024 lx at max. AGC, with F1.9 lens, B/W mode 0.48 lx at max. AGC, with F1.9 lens, Color mode
Video output level	1.0 V (p-p) (75 Ω, composite)
Video S/N ratio	More than 50 dB (AGC OFF)
Backlight compensation	ON / OFF — Slide SW, ON = Multi-spot photometry (64-section) / Center-zone photometry
Day/Night	Auto (High/Low) / Color / B/W: External control
White-balance	ATW / AWC / Manual (MWB) / Outdoor (3200) / Indoor (5600) / Fluorescent (FLUO)
Gain control	High / Normal / OFF
Motion detector	ON / OFF, Motion zoom function
Privacy masking	ON / OFF 8 masking
Electronic shutter	1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec.
Lens	Built-in 2.6x motorized zoom pan-focus auto iris lens, f = 2.8 to 7.3mm (2.6x), F1.9 to 3.0
Synchronizing system	Internal sync. / Line lock
Aperture	HIGH (2 step) / NORMAL / OFF
Auto mode	Sequential pan / Auto pan
Rotation range	Panning: max. 0 to 335 deg Tilting: 0 to 90 deg.
Rotation speed	Panning: max. 120 deg / second (preset) Tilting: max. 120 deg / second (preset)
Preset position setting	16
Communications	Coaxial Control: SSP / H-SSP / PELCO-C, RS-485: SSP / PELCO-D
Environmental conditions	Temperature: -10°C to 50°C [+14°F to 122°F], Humidity: within 90% RH
Enclosure rating	IP66
Power requirement	24V AC ±10%, 50 Hz or 12 V to 15 V DC
Power consumption (approx.)	7.0 W (without heater), 14.0 W (with heater)
AC Adaptor	Not included
Dimensions (approx.)	ø162 x 114.8 mm [ø6.4 x 4.5 in.]
Weight (approx.)	1.5 kg (52.9 oz.) [without options]

NOTE: Specifications subject to change without notice

Heater board VA-50H (sold separately)

Heater board providing protection from cold for camera unit. Allows use in -30°C operating environments. (24 V AC only)

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera - Lens

DVR

SSP System

Monitor

Example System

1/4" Color CCD High-resolution
PT Indoor mini Dome Camera

VCC-P9575P

PAN-FOCUS
Technology in Perspective

2.6x
Optical Zoom



520
TV Lines

Minimum
illumination
1.9 lx

Multi-spot /
Center-zone
BLC

PT
mechanism

Internal sync.
Line lock

Electronic
shutter

SSP

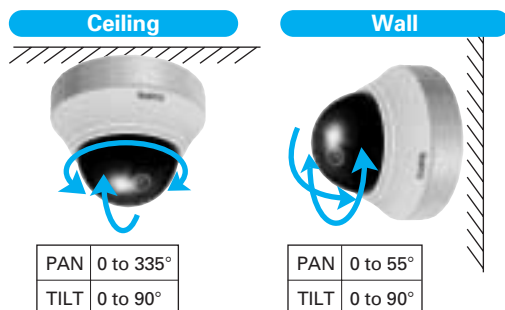
24V AC
12V to
15V DC

NVT
UTP video

PTZ Operations

VCC-P9575P comes with a PT mechanism and allow panning of 335 degrees (55 degrees*) and tilting of 90 degrees (90 degrees*) to reduce blind spots in the surveillance area. When particular angles are preset on the camera (up to sixteen points), it moves to each position quickly at the speed of 120 deg/sec max. for both panning and tilting. Combining these features with the motion detector, it is possible to catch all actions taking place in the area.

* For wall-mounted cameras



Operation protocol	Coaxial Control: SSP / H-SSP / PELCO-C
	RS-485: SSP / PELCO-D

Privacy Masking

When there is a house or even an object as small as a window within the camera frame, it is possible to mask the area so that it will not appear on the monitor screen to protect other's privacy. Up to 8 rectangular masks of arbitrary size can be set. These masking areas may be protected with a 4-digit (max.) password.



Twisted pair terminal (CAT5)

Twisted pair terminal (CAT5) for video signal:



NVT built-in UTP video

Built-in Electronic Shutter

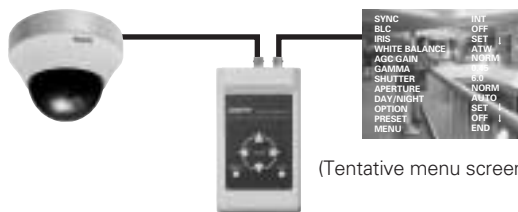
A high-speed electronic shutter that is internally switchable for eight modes using a DIP switch allows adjustment increments from 1/50 to 1/10000 sec.

AC / DC Power Source Compatibility

VCC-P9575P comes with power supply terminals of 24 V AC and 12 V to 15 V DC. Select an appropriate source, depending on the location.

Camera Control Unit VAC-70 (sold separately)

Remote set-up provides users with the feeling that they have the camera right beside their monitor. Capable of setting up VCC-P9575P for all on-screen menu items (intelligent digital motion detector, backlight compensation, white-balance, etc.) *See page 33 for details.

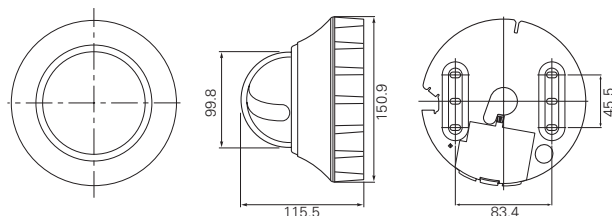


(Tentative menu screen)

Other features

- Includes intelligent motion detector
- Display of assignable camera ID and titles (16 characters max.)

VCC-P9575P



(Unit: mm)

MODEL	VCC-P9575P
Scanning system	PAL standard 625 lines, 50 fields/sec.
Image sensor	1/4" (approx. 3.6 mm x 2.7 mm) interline transfer method CCD
Picture elements	Total: 795(H) x 596(V), Effective: 752(H) x 582(V)
Horizontal resolution	More than 520 TV lines
Minimum illumination	1.9 lx at max. AGC, with F1.9 lens
(approx.)	0.76 lx at max. AGC, with F1.9 lens
Video output level	1.0 V (p-p) (75 Ω, composite)
Video S/N ratio	More than 50 dB (AGC OFF)
Backlight compensation	ON / OFF — Slide SW, ON = Multi-spot photometry (64-section) / Center-zone photometry
Day/Night	
White-balance	ATW / AWC / Manual (MWB) / Outdoor (3200) / Indoor (5600) / Fluorescent (FLUO)
Gain control	High / Normal / OFF
Motion detector	ON / OFF, Motion zoom function
Privacy masking	ON / OFF 8 masking
Electronic shutter	1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec.
Lens	Built-in 2.6x motorized zoom pan-focus auto iris lens, f = 2.8 to 7.3mm (2.6x), F1.9 to 3.0
Synchronizing system	Internal sync. / Line lock
Aperture	HIGH (2 step) / NORMAL / OFF
Auto mode	Sequential pan / Auto pan
Rotation range	Panning: max. 0 to 335 deg Tilting: 0 to 90 deg.
Rotation speed	Panning: max. 120 deg / second (preset) Tilting: max. 120 deg / second (preset)
Preset position setting	16
Communications	Coaxial Control: SSP / H-SSP / PELCO-C RS-485: SSP / PELCO-D
Environmental conditions	Temperature: -10°C to 40°C (+14°F to 104°F), Humidity: within 90% RH
Power requirement	24 V AC ±10%, 50 Hz or 12 V to 15 V DC
Power consumption (approx.)	7.0 W
AC Adaptor	Not included
Dimensions (approx.)	ø150.9 x 115.5 mm (ø6.0 x 4.6 in.)
Weight (approx.)	640 g (22.6 oz.) [without options]

NOTE: Specifications subject to change without notice

1/4" Color CCD High-resolution
Vandal-resistant Dome Camera

VDC-DP7585P

PAN-FOCUS
Technology in Perspective

DAY NIGHT

2.6x
Optical Zoom



520
TV Lines

Minimum
illumination
0.06 lx

Multi-spot /
Center-zone
BLC

ATW
AWC
Manual

Internal sync.
Line lock

Electronic
shutter

SSP
Network
(Option)

24V AC
12V to
15V DC

Zoom
Pan-focus
auto iris lens

IP66

1/4" Color CCD High-resolution
Indoor mini Dome Camera

VCC-P7575PA

PAN-FOCUS
Technology in Perspective

2.6x
Optical Zoom



520
TV Lines

Minimum
illumination
1.9 lx

Multi-spot /
Center-zone
BLC

ATW
AWC
Manual

Internal sync.
Line lock

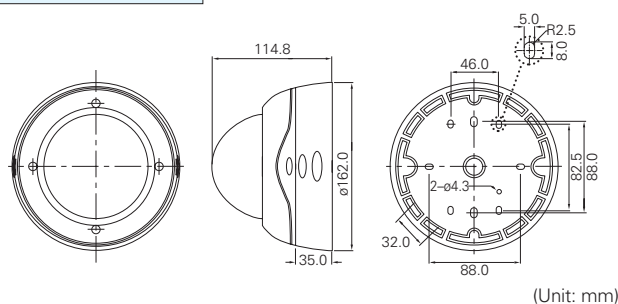
Electronic
shutter

SSP
Network
(Option)

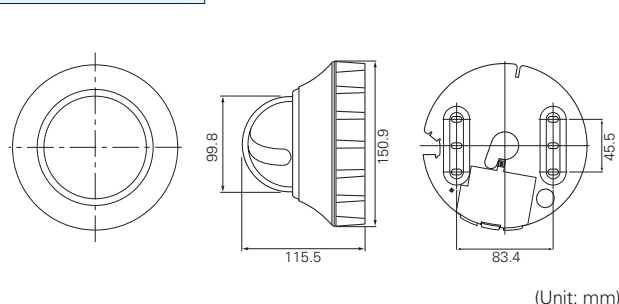
24V AC
12V to
15V DC

Zoom
Pan-focus
auto iris lens

VDC-DP7585P



VCC-P7575PA



MODEL	VDC-DP7585P	VCC-P7575PA
Scanning system	PAL standard 625 lines, 50 fields/sec.	
Image sensor	1/4" Interline transfer method CCD (3.6 x 2.7 mm)	
Number of pixels	Total: 795 (H) x 596 (V), Effective: 752 (H) x 582 (V)	
Horizontal resolution	More than 520 TV lines	
Minimum illumination	50IRE 1.2 lx (F1.9, Gain High, color mode) / 0.06 lx (F1.9, Gain High, B/W mode)	1.9 lx at max. AGC, with F1.9 lens
(approx.)	20IRE 0.48 lx (F1.9, Gain High, color mode) / 0.024 lx (F1.9, Gain High, B/W mode)	0.76 lx at max. AGC, with F1.9 lens
Video output	1.0 V (p-p) (75 Ω, composite)	
Video S/N ratio	More than 50 dB (AGC OFF)	
Backlight compensation	ON (Multi-spot photometry [High/Normal], Center-zone photometry) / OFF	
White balance	ATW / AWC / Manual (MWB) / Outdoor (3200) / Indoor (5600) / Fluorescent (FLUO)	
Gain control	High / Normal / Off	
Gamma	0.45 / 1	
Lens	Built-in motorized zoom pan-focus auto iris lens, f=2.8 to 7.3 mm (2.6x), F1.9 to 3.0	
Electronic shutter	1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec.	
Motion detector	On / Off: Motion zoom function	
Privacy masking	On / Off: Max. 4 masked locations	
Alarm input	1 (NO / NC), with alarm zoom function	
Character display	On / Off, Camera ID max. 16 characters, adjusting position	
Synchronizing system	Internal sync. / Line lock	
Day/Night mode	Auto (High/Low) / Color / B/W: External control	
Aperture compensation	High plus / High / Normal / Off	
Environmental conditions	Operating Temperature: -10°C to +50°C (+14°F to +122°F), Humidity: within 90% RH	Temperature: -10°C to +40°C (+14°F to +104°F), Humidity: within 90% RH
Storage	Temperature: -20°C to +70°C (-4°F to +158°F), Humidity: within 70% RH	
Power supply	24 V AC 10%, 50 Hz or 12 V to 15 V DC	
Power consumption (approx.)	3.5 W [without options], 9.5 W [with options], 23.0 W (with heater)	3.5 W [without options], 9.5 W [with options]
Dimensions (Dia. x H)	ø162 x 114.8 mm [ø6.4 x 4.5 in.]	ø150.9 x 115.5 mm [ø6.0 x 4.6 in.]
Weight (approx.)	1.5 kg (52.9 oz.) [without options]	600 g (21.2 oz.) [without options]

NOTE: Specifications subject to change without notice

Heater board VA-50H (sold separately) for VDC-DP7585P

The heater board protects the camera from cold weather. It allows the camera to operate at temperatures as low as -30°C. (24 V AC only)

Camera Control Unit VAC-70 (sold separately)

See page 33 for details.

Smoked Cover VCZ-50 (sold separately)

for VCC-P9575P / VCC-P7575PA



Half-Mirror Cover VCZ-51 (sold separately)

for VCC-P9575P / VCC-P7575PA



Network Recorder VA-SW3050 (sold separately)

for VDC-DP7585P / VCC-P7575PA See page 20 for details.

Network board VA-50LAN* (sold separately)

for VDC-DP7585P / VCC-P7575PA

Network board VA-51LAN* (sold separately)

for VDC-DP7585P / VCC-P7575PA



* It comes with the VA-SW3050LITE viewer software.

SSP+Twisted pair board VA-50ST (sold separately)

for VDC-DP7585P / VCC-P7575PA

Coaxial control : SSP / H-SSP / PELCO-C, RS-485: SSP / PELCO-D
Twisted pair terminal (CAT5) for video signal: NVT built-in UTP video

NOTE: The VA-50LAN, VA-51LAN and the VA-50ST cannot be used concurrently.

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera · Lens

DVR

SSP System

Monitor

Example System

1/4" Color CCD High-resolution Weatherproof
Zoom Camera

VCC-XZ200P

PAN-FOCUS
Technology in Perspective

DAY NIGHT

2.6x
Optical Zoom



520
TV Lines

Minimum
illumination
0.06 lx

Multi-spot /
Center-zone
BLC

ATW
AWC
Manual

Internal sync.
Line lock

Electronic
shutter

SSP
Network
(Option)

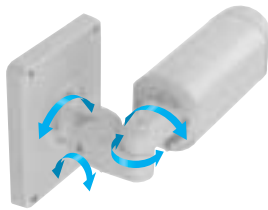
24V AC
12V to
15V DC

Zoom
Pan-focus
auto iris lens

IP66

Adjustable Arm

The angle of the arm is adjustable in all directions. Since the flexible joint is secured by screws, the arm maintains its position without sagging over time. In addition, a safety wire is included to prevent accidents. Installation on a ceiling or wall is easy without any additional parts. The wires are securely protected inside the arm.



Integrated flexible arm

Intelligent switching from Color to B/W

Selecting Color or B/W mode can be done automatically by the camera, or else manually. In addition, the user is allowed to change the switchover point from 1 to 10 lx (nominal) using the on-screen menu. The integration of Color and high sensitivity B/W modes in one camera makes it a versatile tool for any surveillance need. It is truly an all-in-one camera.

Flexible Motion Detector

The Flexible Motion Detector enables reliable and accurate motion detection by analyzing the magnitude of movement and the size of object from changes in picture brightness. When a moving object is detected, VCC-XZ200P can send an alarm signal* to external units and/or switch to the optical zoom mode that can be preset either to 1.0x, 1.4x, 2.0x, or 2.6x zoom.

*Only when using VA-20LAN or VA-20ST board option

Privacy Masking

When there is a house or even an object as small as a window within the camera frame, it is possible to mask the area so that it will not appear on the monitor screen to protect other people's privacy. Up to 4 rectangular masks of arbitrary size can be set per screen. These masking areas may be protected with a 4-digit (max.) password.



Easy Setup with an On-screen Menu

The VCC-XZ200P offers an on-screen menu for setting up the camera any desired way.

Other features

- Display of assignable camera ID and title (16 characters max.)

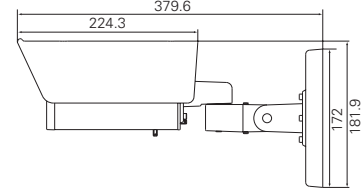
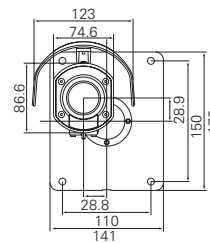
Camera Control Unit VAC-70

(sold separately) See page 33 for details.

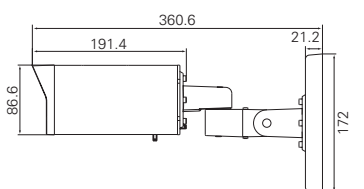
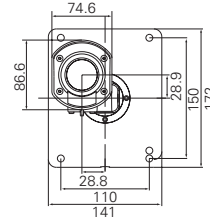


VCC-XZ200P

With Sunshade



Without Sunshade



(Unit: mm)

MODEL	VCC-XZ200P
Scanning system	PAL standard 625 lines, 50 fields/sec.
Image sensor	1/4" Interline transfer method CCD (3.6 x 2.7 mm)
Number of pixels	Total: 795 (H) x 596 (V), Effective: 752 (H) x 582 (V)
Horizontal resolution	More than 520 TV lines
Minimum illumination	1.2 lx (F1.9, Gain High, Color mode) / 0.06 lx (F1.9, Gain High, B/W mode)
(approx.)	20IRE 0.48 lx (F1.9, Gain High, Color mode) / 0.024 lx (F1.9, Gain High, B/W mode)
Video output	1.0 V (p-p) (75 Ω, composite)
Video S/N ratio	More than 50 dB (AGC OFF)
Backlight compensation	ON (Multi-spot photometry [High/Normal], Center-zone photometry) / OFF
White balance	ATW / AWC / Manual (MWB) / Outdoor (3200) / Indoor (5600) / Fluorescent (FLUO)
Gain control	High / Normal / Off
Gamma	0.45 / 1
Lens	Built-in motorized zoom pan-focus auto iris lens, f=2.8 to 7.3 mm (2.6x), F1.9 to 3.0
Electronic shutter	1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec.
Motion detector	On / Off: Motion zoom function
Privacy masking	On / Off: Max. 4 masked locations
Alarm input	1 (NO / NC), with alarm zoom function
Character display	On / Off, Camera ID max. 16 characters, adjusting position
Synchronizing system	Internal sync. / Line lock
Day/Night mode	Auto (High/Low) / Color / B/W: External control
Aperture compensation	High plus / High / Normal / Off
Environmental conditions	Operating Temperature: -10°C to +50°C (+14°F to +122°F), Humidity: within 90% RH Storage Temperature: -20°C to +70°C (-4°F to +158°F), Humidity: within 70% RH
Power supply	24V AC ±10%, 50 Hz or 12 V to 15 V DC
Power consumption (approx.)	3.5 W (without options), 6.0 W (with options), 13.0 W (with heater)
AC Adaptor	Not included
Dimensions (Dia. x H)	141(W) x 181.9(H) x 379.6(D) mm [5.55(W) x 71.61(H) x 149.45(D) in.]
Weight (approx.)	1.56 kg [55.0 oz.] (without sunshade) 1.76 kg [62.1 oz.] (with sunshade)

NOTE: Specifications subject to change without notice

Network board VA-20LAN (sold separately)

This expansion board for network connection enables SANYO color CCD cameras to connect to a network. The user can operate a network connected camera using a web browser (Internet Explorer). It comes with the VA-SW3050LITE viewer software.

SSP+Twisted pair board VA-20ST (sold separately)

Coaxial control : SSP / H-SSP / PELCO-C

RS-485: SSP / PELCO-D

Twisted pair terminal (CAT5) for video signal: NVT built-in UTP video

NOTE: The VA-20LAN and the VA-20ST cannot be used concurrently.

Heater board VA-50H (sold separately)

The heater board protects the camera from cold weather. It allows the camera to operate at temperatures as low as -30°C. (24 V AC only)

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera - Lens

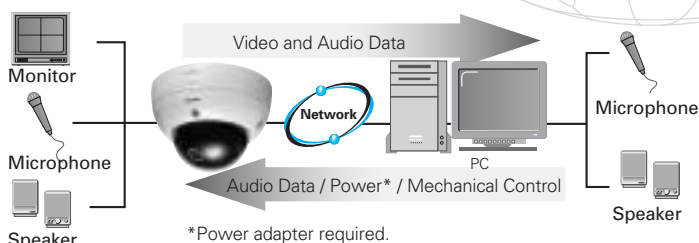
DVR

SSP System

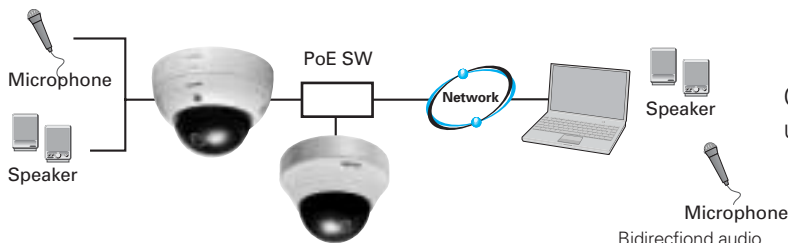
Monitor

Example System

Use an Optional Expansion Board to Add Network Capability to the Camera!
Surveillance over a network is possible for a PC installed with VA-SW3050.



Bidirectional audio communication and remote camera control make it possible to monitor any place regardless of local conditions. Monitoring the ambient sound adds a new dimension to the surveillance.



Camera expansion becomes easy by the use of PoE.

This expansion board for network connection enables SANYO color CCD cameras to connect to a network. The user can operate a network connected camera using a web browser (Internet Explorer). It comes with the VA-SW3050LITE viewer software.

JPEG compatible

Network board VA-50LAN (sold separately)

Applicable models
VDC-DP7585P / VCC-P7575PA

Network board VA-51LAN (sold separately)

PoE / Audio transmission
Applicable models
VDC-DP7585P / VCC-P7575PA



Network board VA-20LAN (sold separately)

Applicable models
VCC-XZ200P

Network board VA-80LAN (sold separately)

Audio transmission
Applicable models
VCC-9800P series / VCC-9700P series /
VCC-9600P series / VCC-9500P series



JPEG / H.264 compatible Coming soon

Network board VA-82LAN (sold separately)

Applicable models
VCC-9800P series / VCC-9700P series /
VCC-9600P series / VCC-9500P series



Network recorder VA-SW3050 (sold separately)

The network recorder VA-SW3050 is an application program that extends the network operation of the camera. By installing this software, it is possible to monitor images from multiple cameras on a split screen and access and operate up to 128 cameras over a network. This is in addition to standard features such as monitoring and recording live images, playing back recorded video, etc. It is an exclusive software package for CCD cameras that even enables alarm and timer recordings.

VA-SW3050 Features (Standard specifications)

- Accessible to up to 128 cameras.
- Can split the display into one, four or sixteen screens.
- Recording can be set to start automatically by timer or by alarm.
- Image searching function can search through recorded images for a playback.
- Images on the monitoring display can be printed and saved.
- Changes camera settings, and controls cameras remotely.
- Up to ten users can be registered for each computer, and the operational authorization level can be set differently for each camera.
- Up to 16 computers can access one camera simultaneously (including access from a web browser).
- There are a variety of other optional functions to facilitate monitoring operation.



System Requirements

Model	VA-SW3050
PC	IBM PC/AT and compatibles
OS	Windows® 2000 Professional SP4, Windows® XP Home Edition SP2, Windows® XP Professional SP2
CPU/Memory	When the number of cameras connected is 4 or fewer: CPU: Pentium® 4, 2.0 GHz or higher, Memory: 512 MB or more When the number of cameras connected is between 5 and 16: CPU: Pentium® 4, 3.0 GHz or higher, Memory: 1 GB or more
MEMO	When you record live videos from 17 or more cameras simultaneously on a single PC, recording operation may fail depending on your monitoring system configuration. When the recording operation fails, add PCs used for recording so that the number of cameras to record simultaneously per PC becomes 16 or fewer.
Network interface	100BASE-TX
Display card	1024 x 768 pixels or higher, 16 million colors or higher AGP graphics card supporting hardware overlay Or PCI Express graphics card (Requires the latest DirectX® 9.0c compatible driver.)
Recommended graphics chip	ATI RADEON9000 series or higher
nVidia	GeForce4 series or higher Quadro4 series or higher
Matrox	MillenniumP series or higher
Voice	Sound card and speakers with 100% DirectX® compatibility
Component	DirectX® 9.0c



VA-SW3050 Feature Comparison

	VA-SW3050	VA-SW3050 LITE
Number of cameras supported	Max. 128	Max. 128
Number of users supported	Max. 16	Max. 16
Search camera	✓	✓
Live monitor	✓	✓
Camera PTZ, etc.	✓	✓
Control Menu	✓	✓
Video recording	✓	—
Playback	✓	—
Video search	✓	—
Backup/Restore	✓	—
Download/Print	✓	—

System Requirements

Model	VA-SW3050 LITE
PC	IBM PC/AT and compatibles
OS	Windows® 2000 Professional SP4, Windows® XP Home Edition SP2, Windows® XP Professional SP2
CPU/Memory	When the number of cameras connected is 4 or fewer: CPU: Pentium® 4, 2.0 GHz or higher, Memory: 512 MB or more When the number of cameras connected is between 5 and 16: CPU: Pentium® 4, 3.0 GHz or higher, Memory: 1 GB or more
Network interface	100BASE-TX
Display card	1024 x 768 pixels or higher, 16 million colors or higher AGP graphics card supporting hardware overlay Or PCI Express graphics card (Requires the latest DirectX® 9.0c compatible driver.)
Recommended graphics chip	ATI RADEON9000 series or higher
nVidia	GeForce4 series or higher Quadro4 series or higher
Matrox	MillenniumP series or higher
Voice	Sound card and speakers with 100% DirectX® compatibility
Component	DirectX® 9.0c

VA-51LAN	
Compression	JPEG
Picture resolution	720 x 240 / 640 x 480 / 360 x 240 / 180 x 120 pixels
Picture quality	5 levels (Basic, Normal, Enhanced, Fine, Super Fine)
Frame rate	Max. 30 IPS (720 x 240)
Voice compression method	G. 711(192 Kbps), full duplex
Microphone input	-62 to -32 dB (monaural microphone) 3.5 Ø mini jack
Voice output	LINE OUT monaural voice output Maximum -8 dBs 3.5 Ø mini jack
Bandwidth	128,256,512 Kbps, 1,2,2,4 Mbps, no limitation
Alarm buffer	Up to 8 MB; configurable
Interface	10BASE-T / 100BASE-TX (RJ-45 connector)
PoE support	Compliant with IEEE802.3af
Protocol	TCP, UDP, HTTP, HTTPS, SMTP, NTP, DHCP, FTP, UPnP
Simultaneous access capacity	Image: Maximum 16, Voice: Maximum 16 (admin:1)
Security	BASIC authentication (ID/password), SSL supported (Image only)

VA-20LAN / VA-50LAN	
Compression	JPEG
Picture resolution	720 x 240 / 640 x 480 / 360 x 240 / 180 x 120 pixels
Picture quality	5 levels (Basic, Normal, Enhanced, Fine, Super Fine)
Frame rate	Max. 30 IPS (720 x 240)
Bandwidth	128,256,512 Kbps, 1,2,2,4 Mbps, no limitation
Alarm buffer	Up to 8 MB; configurable
Interface	10BASE-T / 100BASE-TX (RJ-45 connector)
Protocol	TCP, UDP, HTTP, HTTPS, SMTP, NTP, DHCP, FTP, UPnP
Simultaneous access capacity	Image: Maximum 16, Voice: Maximum 16 (admin:1)
Security	BASIC authentication (ID/password), SSL supported (Image only)

	VA-80LAN	VA-82LAN
Image compression	JPEG	JPEG / H.264
Picture resolution	720 x 572, 720 x 572DFFC*, 720 x 286, 640 x 480, 640 x 480DFFC*, 360 x 572, 180 x 143	
Picture quality	5 levels	
Frame rate	Max. 25 IPS (720 x 286)	
Audio compression method	G.711 (192 kbps), full duplex	
Microphone input	-62 to -32 dB (monaural microphone) 3.5 mm mini jack	
Audio output	LINE OUT, monaural audio output, Max. -8 dB, 3.5 mm mini jack	
Bandwidth	128, 256, 512 Kbps, 1, 2, 3, 4 Mbps, no limitation	
Alarm buffer	Up to 8 MB; configurable	
Interface	10BASE-T / 100BASE-TX (RJ-45 connector)	
Protocols	TCP, UDP, HTTP, HTTPS, SMTP, NTP, DHCP, FTP, UPnP	
Simultaneous access capacity	Image: Max. 16, Voice: Max. 16 (admin: 1)	
Security	BASIC authentication (ID/password), SSL supported (image only)	
Bundled software	VA-SW3050LITE	

*DFFC Function

Alleviates jaggies around edges and blurring caused by the time difference in displaying two fields. With the DFCC modes, the DFCC function is automatically activated when motion is locally detected to allow surveillance images free of blurring even when the subject is in motion.

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera · Lens

DVR

SSP System

Monitor

Example System

1/4" Color CCD High-resolution Weatherproof
Auto Focus Zoom Camera

VCC-XZ400P

DAY NIGHT

22x
Optical Zoom



520
TV Lines

Minimum
illumination
0.06 lx

Multi-spot/
5-section
BLC

ATW
AWC
Manual

Internal sync.
Line lock

**Electronic
shutter**

SSP

24V AC
12V to
15V DC

IP66

**Pelco-D
support**

All-in-one Design Weatherproof Camera

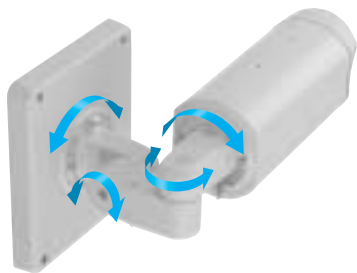
Integrated Unit for Easy Installation

An all-in-one package with autofocus camera, lens, weatherproof housing, wall-mount fittings and a sunshield. Installation of the sunshield is optional depending on the environment. Without the sunshield, the camera is very compact and all you need to do is set it up with system devices of your choice.

No other accessory needed.

Adjustable Arm

The angle of the arm is adjustable in all directions. Since the flexible joint is secured by screws, the arm maintains its position without sagging over time. In addition, a safety wire is included to prevent accidents. Installation on a ceiling or wall is easy without any additional parts. The wires are securely protected inside the arm.



Max. 352x Zoom

22x Optical Zoom and 16x Digital Zoom

The 22x optical zoom and 16x digital zoom produce a combined close-up effect of 352x. This makes it possible to monitor details of even a far-off subject, allowing one camera to monitor a wide area.

Intelligent Switching from Color to B/W

Selecting Color or B/W mode can be done automatically by the camera, or else manually. In addition, the user is allowed to change the switchover point from 1 to 10 lx (nominal) using the on-screen menu. The integration of Color and high sensitivity B/W modes in one camera makes it a versatile tool for any surveillance need. It is truly an all-in-one camera.

13 Mode Electronic Shutter Speeds

2x, 4x, 8x, 16x, 32x, 1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, and 1/10000 sec.

Privacy Masking

When there is a house or even an object as small as a window within the camera frame, it is possible to mask the area so that it will not appear on the monitor screen to protect other's privacy. Up to 4 rectangular masks of arbitrary size can be set per screen. These masking areas may be protected with a 4-digit (max.) password.

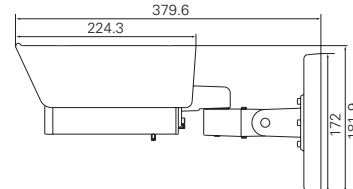
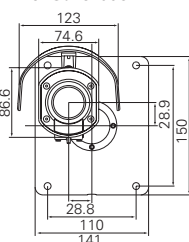


Camera Control Unit VAC-70

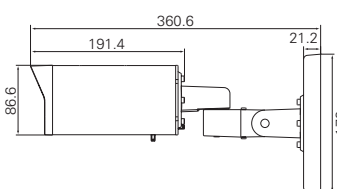
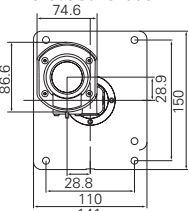
(sold separately) See page 33 for details.

VCC-XZ400P

With Sunshade



Without Sunshade



(Unit: mm)

MODEL	VCC-XZ400P
Scanning system	PAL standard 625 lines, 50 fields/sec.
Image sensor	1/4" (approx. 3.6 mm x 2.7 mm) interline transfer method CCD
Picture elements	Total: 795(H) x 596(V), Effective: 752(H) x 582(V)
Horizontal resolution	More than 520 TV lines
Minimum illumination (approx.)	0.06 lx at max. AGC, 0.002 lx at 32x sensitivity with F1.6 lens, B/W mode 1.2 lx at max. AGC, 0.04 lx at 32x sensitivity with F1.6 lens, Color mode
	0.024 lx at max. AGC, 0.0008 lx at 32x sensitivity with F1.6 lens, B/W mode 0.48 lx at max. AGC, 0.016 lx at 32x sensitivity with F1.6 lens, Color mode
Electronic sensitivity boost	AUTO / OFF — (on-screen) Up to 32x max. setting
Video output level	1.0 V (p-p) (75 Ω, composite)
Video S/N ratio	More than 50 dB (AGC OFF)
Backlight compensation	ON / OFF, ON = Multi-spot photometry (48-section) / 5-section photometry / Multi-spot masking (48-section) — (on-screen)
Day/Night	AUTO / COLOR / B/W
White-balance	ATW / AWC / Manual
Gain control	OFF / -6 / ±0 / +6 / +9 / +12 / +15dB
Motion detector	ON / OFF, individual settings possible
Privacy masking	ON / OFF, max. 4 masked locations Password lock possible
Mirror image effect	Horizontally (H), vertically (V), horizontally and vertically (HV)
Electronic shutter	Fast shutter mode: 1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec. Slow shutter mode: 2x, 4x, 8x, 16x, 32x
Lens	f = 3.6 to 79.2mm F1.6 to 3.8 auto focus
Auto-focus	Auto / Manual / One-push
Synchronizing system	Internal sync. / Line lock
V phase adjustment	LINE PHASE
Optical zoom	22x
Electronic zoom	16x
Communication	RS-485 (SSP, Pelco-D) / Coaxial Control (SSP)
Video signal	VIDEO OUT
External lens control	ZOOM / FOCUS, ±6 to ±12 V DC
Alarm input	1
Alarm output	1
RS-485	A, B, GND
Environmental conditions	Temperature: -20°C to 50°C [-4° to 122°F], (with power source connected) Humidity: within 90% RH
Enclosure rating	IP66
Power requirement	24 V AC ±10%, 50 Hz or 12 V to 15 V DC
Power consumption (approx.)	4.5 W
AC Adaptor	Not included
Dimensions (approx.)	141(W) x 181.9(H) x 379.6(D) mm [5.55(W) x 71.61(H) x 149.45(D) in.]
Weight (approx.)	1.6 kg [56.4 oz.] (without sunshade) 1.8 kg [63.5 oz.] (with sunshade)

NOTE: Specifications subject to change without notice

1/4" Color CCD High-resolution
Auto Focus Zoom Camera

VCC-ZM400P

DAY NIGHT

22x
Optical Zoom



520
TV Lines

Minimum
illumination
0.06 lx

Multi-spot/
5-section
BLC

ATW
AWC
Manual

Internal sync.
Line lock

Electronic
shutter

SSP

24V AC
12V to
15V DC

AF Zoom
lens

Pelco-D
support

1/4" Color CCD High-resolution
Auto Focus Zoom Camera

VCC-ZM300PA

22x
Optical Zoom



520
TV Lines

Minimum
illumination
2.0 lx

Multi-spot/
5-section
BLC

ATW
AWC
Manual

Internal sync.
Line lock

Electronic
shutter

SSP

24V AC
12V to
15V DC

AF Zoom
lens

Pelco-D
support

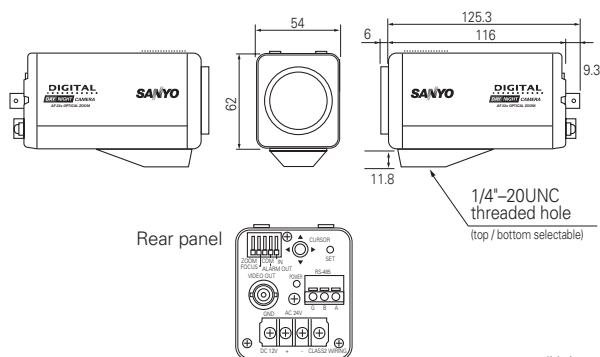
- 22x Optical Zoom and 16x Digital Zoom
- 32x Electronic Sensitivity
- Includes intelligent digital motion detector
- 13 Mode Electronic Shutter Speeds
- Built-in Electronic Shutter
- Privacy masking (Up to 4 masks)
- Title Display (16 characters max.)
- Adjustable gamma correction and aperture settings

Camera Control Unit VAC-70 (sold separately)

Remote set-up provides users with the feeling that they have the camera right beside their monitor. Capable of setting up VCC-ZM400P / VCC-ZM300PA for all on-screen menu items (intelligent digital motion detector, backlight compensation, white-balance, etc.)

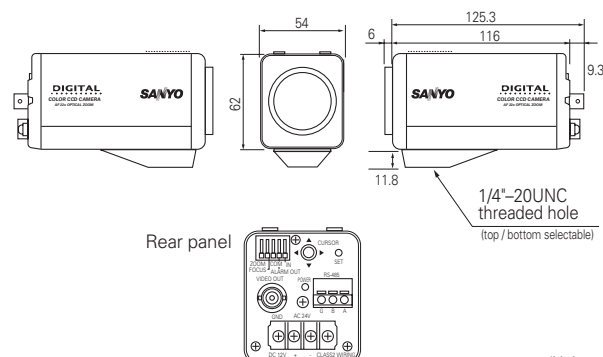


VCC-ZM400P



(Unit: mm)

VCC-ZM300PA



(Unit: mm)

MODEL	VCC-ZM400P	VCC-ZM300PA
Scanning system	PAL standard 625 lines, 50 fields/sec.	
Image sensor	1/4" (approx. 3.6 mm x 2.7 mm) interline transfer method CCD	
Picture elements	Total: 795(H) x 596(V), Effective: 752(H) x 582(V)	
Horizontal resolution	More than 520 TV lines	
Minimum illumination (approx.)	50IRE 0.06 lx at max. AGC, 0.002 lx at 32x sensitivity with F1.6 lens, B/W mode 1.2 lx at max. AGC, 0.04 lx at 32x sensitivity with F1.6 lens, Color mode 20IRE 0.024 lx at max. AGC, 0.0008 lx at 32x sensitivity with F1.6 lens, B/W mode 0.48 lx at max. AGC, 0.0016 lx at 32x sensitivity with F1.6 lens, Color mode	2.0 lx at max. AGC, 0.06 lx at 32x sensitivity with F1.6 lens 0.8 lx at max. AGC, 0.024 lx at 32x sensitivity with F1.6 lens
Electronic sensitivity boost	AUTO / OFF — (on-screen)	
Video output level	1.0 V (p-p) (75 Ω, composite)	
Video S/N ratio	More than 50 dB (AGC OFF)	
Backlight compensation	ON / OFF, ON = Multi-spot photometry (48-section) / 5-section photometry / Multi-spot masking (48-section) — (on-screen)	
White-balance	ATW / AWC / Manual	
Gain control	ON (-6 / ±0 / +6 / +9 / +12 / +15dB) / OFF	
Electronic shutter	Fast shutter mode: 1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec. Slow shutter mode: 2x, 4x, 8x, 16x, 32x	
Lens	f = 3.6 to 79.2mm F1.6 to 3.8 auto focus	f = 4.0 to 88mm F1.6 to 3.8 auto focus
Synchronizing system	Internal sync. / Line lock	
V phase adjustment	LINE PHASE	
Optical zoom	22x	
Electronic zoom	16x	
Communication	RS-485 (SSP, Pelco-D) / Coaxial Control (SSP)	
Environmental conditions	Temperature: -10°C to 50°C (+14°F to 122°F), Humidity: within 90% RH	
Power requirement	24V AC ± 10%, 50 Hz or 12 V to 15 V DC	
Power consumption (approx.)	4.5 W	
AC Adaptor	Not included	
Dimensions (approx.)	54(W) x 62(H) x 116(D) mm [2.13(W) x 2.44(H) x 4.57(D) in.]	
Weight (approx.)	380 g [12.3 oz.]	

NOTE: Specifications subject to change without notice

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera - Lens

DVR

SSP System

Monitor

Example System

1/3" Color CCD High-resolution Wide Dynamic Range
Vandal-resistant Dome Camera with Vari-focal lens

VDC-W1595VP



480
TV Lines

Minimum
illumination
1.0 lx

Wide
Dynamic

ATW
AWB

Internal sync.
Line lock
(24V AC user)

24V AC
12V to
15V DC

Vari-focal
lens

IP66

1/3" Color CCD High-resolution
Vandal-resistant Dome Camera with Vari-focal lens

VDC-D1585VP



520
TV Lines

Minimum
illumination
0.05 lx

BLC

ATW
AWB

Internal sync.
Line lock
(24V AC user)

24V AC
12V to
15V DC

Vari-focal
lens

IP66

3 variations

Wide Dynamic Range, Day/Night camera, or color High-resolution camera available. 2.3x vari-focal lens is ideal for interior. Weatherproof construction also makes it suitable for outdoor use. (IP66 rated)

IP66

VDC-W1595VP, VDC-D1585VP, and VDC-C1575VP are all designed to fight off dust and water. The IP66 compliant package makes them suitable for outdoor installation at locations exposed to wind and rain. Of course, this does not prohibit the use for indoor applications.

Wide dynamic range for clear images of high-contrast subjects (VDC-W1595VP)

When using a conventional camera, monitoring of windows, doors and other strongly backlit areas can result in featureless blacks and transparent whites. With the newly developed wide-dynamic-range technology, however, two shutter speeds, one normal (1/50) and the other high speed, are employed to record clearer images of the subject by extracting highlights and shadows from the two shots and then combining them into a single detailed image.



Normal speed



High speed



Single image from Combined Exposures

Sharp image with 520 TV lines

The VDC-D1585VP and VDC-C1575VP deliver 520 TV lines. The DSP with a proprietary algorithm produces sharp outlines and natural color with no color smudges.



520 TV lines picture



Standard resolution picture

MODEL		VDC-W1595VP	VDC-D1585VP	VDC-C1575VP
Scanning system		PAL standard 625 lines, 50 fields/sec.		
Image sensor		1/3" (approx. 4.8 mm x 3.6 mm) interline transfer method CCD		
Picture elements		Total: 795(H) x 596(V), Effective: 752(H) x 582(V)		
Horizontal resolution		480 TV lines	520 TV lines	
Minimum illumination	50 IRE	1.0 lx (at F 1.4)	1.0 lx (at F 1.4, color mode) 0.05 lx (at F 1.4 lens, B/W mode)	1.0 lx (at F 1.4)
	20 IRE	0.4 lx (at F 1.4)	0.4 lx (at F 1.4, color mode) 0.02 lx (at F 1.4 lens, B/W mode)	0.4 lx (at F 1.4)
Video output level		1.0 V (p-p) (75 Ω, composite)		
Video S/N ratio		More than 50 dB (AGC OFF)		
Backlight compensation			ON / OFF — Slide SW	
Wide dynamic		ON / OFF (54 dB typical)		
White-balance		ATW / AWB		
Gain control		ON / OFF		
Gamma		0.45		
Iris control		Optical auto iris lens		
Lens		Built in vari-focal lens f=2.6 to 6.0 mm		
Angle of view	Horizontal	0 to 360°		
	Vertical	0 to 120°		
Synchronizing system		Internal sync. / Line lock (24 V AC user)		
Sockets	Video signal	VIDEO OUT — BNC		
	Power supply	24 V AC, GND, 12 V DC		
Operating conditions	Operating Storage	Temperature: -10°C to 40°C [+14F° to 104°F], Humidity: within 90% RH	Temperature: -10°C to 50°C [+14F° to 122°F], Humidity: within 90% RH	
Power requirement		Temperature: -20°C to 70°C [-4F° to 158°F], Humidity: within 70% RH 24 V AC ± 10%, 50 Hz or 12 V to 15 V DC		
Power consumption (approx.)		4.0 W	2.6 W	
AC Adaptor		Not included		
Waterproof standard		IP66		
Dimensions (approx.)		140.2(ø) x 91.5(H) mm [5.6(ø) x 3.6(H) in.]		
Weight (approx.)		845 g [13.8 oz.]	850 g [13.9 oz.]	845 g [13.8 oz.]

NOTE: Specifications subject to change without notice

1/3" Color CCD High-resolution Vandal-resistant Dome Camera with Vari-focal lens

VDC-C1575VP



520 TV Lines	Minimum illumination 1.0 lx	BLC	ATW AWB	Internal sync. Line lock (24V AC user)
		24V AC 12V to 15V DC	Vari-focal lens	IP66

1/3" Color CCD Indoor mini Dome Camera with Vari-focal Lens

VCC-9615P



480 TV Lines	Minimum illumination 1.8 lx	Multi-spot / Center-zone BLC	ATW Manual	Internal sync.
		24V AC 12V to 15V DC	Vari-focal lens	

2.3x Vari-focal Lens

The 2.3x vari-focal lens (2.6 mm to 6 mm) is capable of providing wide angle pictures in addition to standard pictures. The camera allows its user to manually adjust the pan and tilt angles in the range of 360° and 120° respectively.

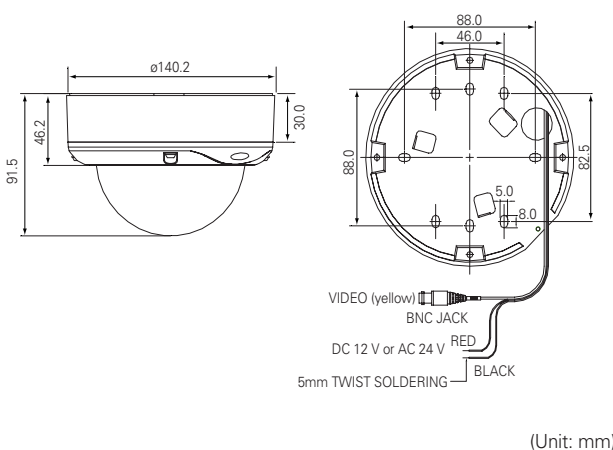
Lens adjustments

1. Adjust the panning (360°) and tilt (120°) position.
2. Setting the zoom position by using Zoom Lever Screw.
3. Setting the focus by using Focus Lever Screw.

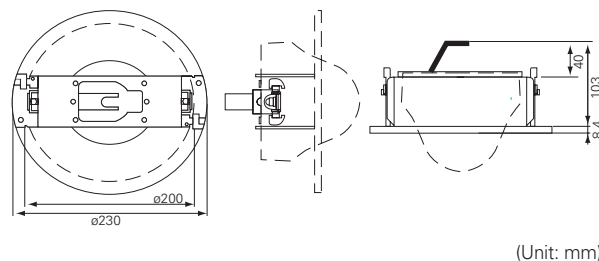
AC / DC Power Source Compatibility

VDC-W1595VP / VDC-D1585VP / VDC-C1575VP come with power supply terminals of 24 V AC and 12 V to 15 V DC. Select an appropriate source, depending on the location.

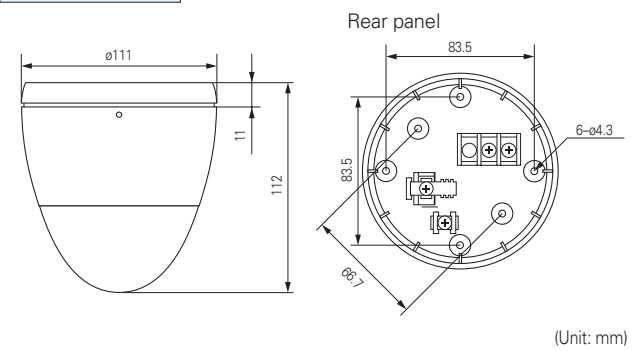
VDC-W1595VP / VDC-D1585VP / VDC-C1575VP



VA-DK02 In-Ceiling Bracket for VDC-W1595VP / VDC-D1585VP / VDC-C1575VP

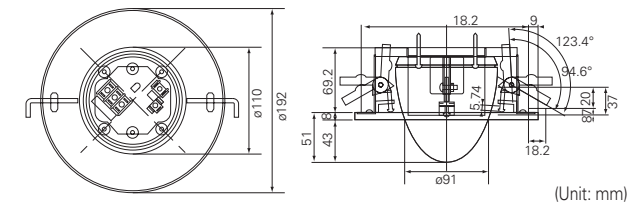


VCC-9615P



VA-DK01

In-Ceiling Bracket for VCC-9615P



MODEL	VCC-9615P
Scanning system	PAL standard 625 lines, 50 fields/sec.
Image sensor	1/3" (approx. 4.8 mm x 3.6 mm) interline transfer method CCD
Picture elements	Total: 795(H) x 596(V), Effective: 752(H) x 582(V)
Horizontal resolution	More than 480 TV lines
Minimum illumination	1.8 lx (at F1.6)
50IRE	0.72 lx (at F1.6)
20IRE	0.72 lx (at F1.6)
Video output level	1.0 V (p-p) (75 Ω, composite)
Video S/N ratio	More than 50 dB
Backlight compensation	ON / OFF — Slide SW, Center-zone photometry system
White-balance	ATW / Manual
Color adjust. at manual	R, B — VR (inside cover)
Gain control	Automatic
Lens	Built-in vari-focal lens (F1.6 to 2.3, f = 2.6 to 6.0 mm)
Angle of view	
Horizontal	103° to 51°
Vertical	77° to 38°
Diagonal	128° to 64°
Aperture correction	Normal / High — Slide SW
Synchronizing system	Internal sync.
Sockets	
Video signal	
Power supply	24 V AC, GND — 3-pin terminal 12 V to 15 V DC — 2-pin terminal
Environmental conditions	Operating Temperature: -10°C to 50°C (14°F to 122°F), Humidity: within 90% RH Storage Temperature: -20°C to 70°C (4°F to 158°F), Humidity: within 70% RH
Power requirement	24 V AC ±10%, 50 Hz or 12 V to 15 V DC
Power consumption (approx.)	3.5 W
AC Adaptor	Not included
Camera mount	
Dimensions (approx.)	111(W) x 112(H) mm [4.37(W) x 4.41(H) in.]
Weight (approx.)	420 g [14.8 oz.]

NOTE: Specifications subject to change without notice

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera · Lens

DVR

SSP System

Monitor

Example System

1/3" Color CCD Wide Dynamic Range Camera

VCC-WD8575P

DAY NIGHT



Shown with optional lens

480
TV LinesMinimum
illumination
0.025 lx5-section /
Center-zone
BLCATW
AWC
ManualInternal sync.
Line lockElectronic
shutterDC/VIDEO
auto iris lens24V AC
12V to
15V DC

Wide dynamic range for clear images of high-contrast subjects

When using a conventional camera, monitoring of windows, doors and other strongly backlit areas can result in featureless blacks and transparent whites. With the newly developed wide dynamic range technology, however, two shutter speeds, one normal (1/50) and the other high speed, are employed to record clearer images of the subject by extracting highlights and shadows from the two shots and then combining them into a single detailed image.



Normal speed



High speed



Single image from Combined Exposures

Electronic zoom

The VCC-WD8575P incorporates a 2.5x electronic zoom. Activated as an alarm zoom when triggered by an external alarm sensor or as a motion zoom when motion is detected within the field of view, it serves to automatically enlarge surveillance images for verification when the unexpected occurs.

Built-in Intelligent Digital Motion Detector and Intelligent Zoom Detector

The Intelligent Digital Motion Detector enables reliable and accurate motion detection by analyzing the magnitude of movement and the size of object and other factors from changes in picture brightness. When a moving object is detected, VCC-WD8575P can send an alarm signal to external units and/or switch the picture to up to 2.5x electronic zoom mode. Furthermore, an external alarm input terminal makes it possible, when an alarm signal is received, to automatically zoom in to the site of activity, according to a preset zooming operation.

2.5x
zoom

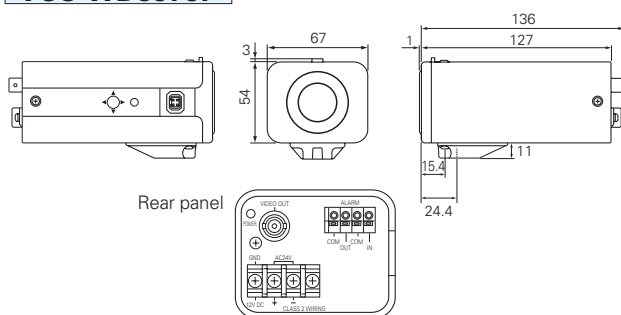
- Built-in Electronic Shutter •Privacy Masking •40x sensitivity boost for minimum illumination of 0.002 lx
- Easy on-screen setup and adjustment of default settings

Camera Control Unit VAC-70

(sold separately) See page 33 for details.



VCC-WD8575P



(Unit: mm)

MODEL	VCC-WD8575P
Scanning system	PAL standard 625 lines, 50 fields/sec.
Image sensor	1/3" (approx. 3.6 mm x 2.7 mm) interline transfer method CCD
Picture elements	Total: 795(H) x 596(V), Effective: 752(H) x 582(V)
Horizontal resolution	More than 480 TV lines
Minimum illumination (approx.)	50IRE 0.05 lx (Gain NORM) / 0.025lx (Gain HIGH), 0.002 lx (40x electronic sensitivity boost) with F1.2 lens, B/W mode 1.0 lx (Gain NORM) / 0.5lx (Gain HIGH), 0.025 lx (40x electronic sensitivity boost) with F1.2 lens, Color mode 20IRE 0.02 lx (Gain NORM) / 0.01 lx (Gain HIGH), 0.0008 lx (40x electronic sensitivity boost) with F1.2 lens, B/W mode 0.4 lx (Gain NORM) / 0.2lx (Gain HIGH), 0.01 lx (40x electronic sensitivity boost) with F1.2 lens, Color mode
Electronic sensitivity boost	AUTO / OFF (works with auto iris), up to x40
Video output level	1.0 V (p-p) (75 Ω, composite)
Video S/N ratio	More than 50 dB (AGC OFF)
Backlight compensation	ON / OFF, ON = 5-section photometry / Center-zone photometry — (activated when auto iris lens used)
Wide dynamic range	ON (adjustable) / OFF — (activated when auto iris lens used) 54 dB typical
White-balance	ATW / ATW-A / AWC / Manual / Indoor / Outdoor / Fluorescent
Gain control	ON (3-steps) / OFF / Manual
Gamma	0.45 / 1 / MODE1 / MODE2
Electronic shutter	Fast shutter mode 8-Mode: 1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec.
Aperture	ON (adjustable) / OFF
Privacy masking	ON / OFF, max. 8 masked locations Password lock possible
Motion detector	ON / OFF, individual settings possible
Iris control	Optical auto iris lens / Electronic iris (indoor use)
Lens mount	CS mount
Flange back	12.5 mm ±0.5 mm adjustment
Auto iris lens	DC / VIDEO (adjustable iris level) DC: Drive coil (+, -), Brake (Damp) coil (+, -)
Auto iris output	VIDEO: +12 V DC (Max. 50 mA), Video output (1.0 V p-p, high impedance)
Electronic iris range	1.0 lx to 50,000 lx (with F 1.2 lens: color mode)
Synchronizing system	Internal sync. / Line lock (with V phase adjustment)
V phase adjustment	VR (rear)
Mirror image effect	Horizontally (H), vertically (V), horizontally and vertically (HV)
Sockets	Video signal VIDEO OUT — BNC (rear) Auto iris lens LENS — 4-pin (side) Alarm input/output 1 alarm input (for external alarm switch) 1 alarm output (for sending signal to system controller or alarm detection device such as a buzzer) Power supply 24 V AC, GND — 3-pin terminal (rear), 12 V DC, — 2-pin terminal (rear)
Communications	Coaxial control, VAC-70 (sold separately)
Environmental conditions	Operating Temperature: -10°C to 50°C [+14°F to 122°F], Humidity: within 90% RH Storage Temperature: -20°C to 70°C [-4°F to 158°F], Humidity: within 70% RH
Power requirement	24 V AC ± 10%, 50 Hz or 12 V to 15 V DC
Power consumption (approx.)	6 W
AC Adaptor	Not included
Camera mount	1/4"-20 UNC (top / bottom selectable)
Dimensions (approx.)	67(W) x 54(H) x 128(D) mm [2.6(W) x 2.1(H) x 6.04(D) in.] (without camera & lens mounts)
Weight (approx.)	420 g [14.8 oz.] (without lens)

NOTE: Specifications subject to change without notice

1/3" Color CCD High-resolution Camera

VCC-4795P**DAY NIGHT**

Shown with optional lens

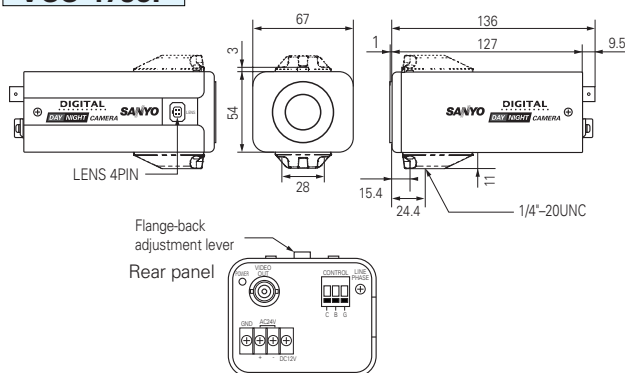
520 TV Lines	Minimum illumination 0.01 lx	Multi-spot / Center-zone BLC	ATW Manual	Internal sync. Line lock
Electronic shutter	DC auto iris lens	24V AC 12V to 15V DC		

1/3" Color CCD High-resolution Camera

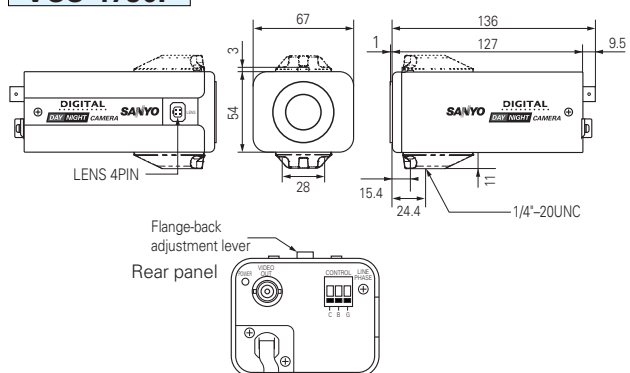
VCC-4790P**DAY NIGHT**

Shown with optional lens

520 TV Lines	Minimum illumination 0.01 lx	Multi-spot / Center-zone BLC	ATW Manual	Internal sync. Line lock
Electronic shutter	DC auto iris lens	220V to 230V AC		

VCC-4795P

(Unit: mm)

VCC-4790P

(Unit: mm)

MODEL	VCC-4795P	VCC-4790P
Scanning system	PAL standard 625 lines, 50 fields/sec	
Image sensor	1/3" (approx. 4.8 mm x 3.6 mm) interline transfer method CCD	
Picture elements	Total: 795 (H) x 596 (V), Effective: 752 (H) x 582 (V)	
Horizontal resolution	More than 520 TV lines	
Minimum illumination (approx.)	0.01 lx (F1.2, Gain High, B/W mode) 0.45 lx (F1.2, Gain High color mode)	
Video output level	1.0 V (p-p) (75 Ω, composite)	
Video S/N ratio	More than 50 dB (AGC off)	
Backlight compensation	ON / OFF — Slide SW, ON = Multi-spot photometry (64-section) / Center-zone photometry — (activated when auto iris lens used)	
White-balance	ATW / Manual — Slide SW	
Gain control	Normal / High — Slide SW	
Gamma	$\gamma = 0.45$	
Light control	Optical auto iris lens / Electronic iris (indoor use)	
Lens mount	CS mount (C mount: using C-mount adaptor supplied)	
Flange back	12.5 mm ± 0.5 mm adjustment	
Auto iris lens	DC	
Auto iris output	DC: Drive coil (+, -), Brake (Damp) coil (+, -)	
Lens iris level	LEVEL: L to H — VR (side)	
Electronic shutter	1/50, 1/120, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec.	
Electronic iris	ON / OFF — Slide SW	
Aperture compensation	Sharp / Normal	
Electronic iris range	0.6 lx to 30,000 lx (F 1.2 lens: color mode), 0.9 lx to 45,000 lx (F 1.4 lens: color mode)	
Synchronizing system	Internal sync, Line lock	
Sockets	VIDEO OUT — BNC	
Auto iris lens	LENS — 4-pin (side)	
Power supply	24 V AC, GND — 3-pin terminal (rear) 12 V DC, NC — 3-pin terminal (rear)	220 V to 230 V AC, 50Hz
Environmental conditions	Operating Temperature: -10°C to 50°C [14°F to 122°F], Humidity: within 90% RH Storage Temperature: -20°C to 70°C [-4°F to 158°F], Humidity: within 70% RH	
Power requirement	24 V AC $\pm 10\%$, 50 Hz or 12 V to 15 V DC	220 V to 230 V AC, 50 Hz
Power consumption (approx.)	3.7 W	3.6 W
AC Adaptor	Not included	
Camera mount	1/4"-20 UNC (top / bottom selectable)	
Dimensions (approx.)	67(W) x 54(H) x 128(D) mm [2.64(W) x 2.13(H) x 6.04(D) in.]	
Weight (approx.)	400 g [14.1 oz] (without lens)	600 g [21.2 oz] (without lens)

NOTE: Specifications subject to change without notice

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera - Lens

DVR

SSP System

Monitor

Example System

1/3" Color CCD High-resolution Camera

VCC-6592P



Shown with optional lens

520
TV LinesMinimum
illumination
0.3 lxMulti-spot /
Center-zone
BLCATW
ManualInternal sync.
Line lockElectronic
shutterDC / VIDEO
auto iris lens12V to
15V DC

1/3" Color CCD High-resolution Camera

VCC-6585P



Shown with optional lens

520
TV LinesMinimum
illumination
0.5 lxCenter-zone
BLCATW
ManualInternal sync.
Line lockDC
auto iris lens24V AC
12V to
15V DC

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

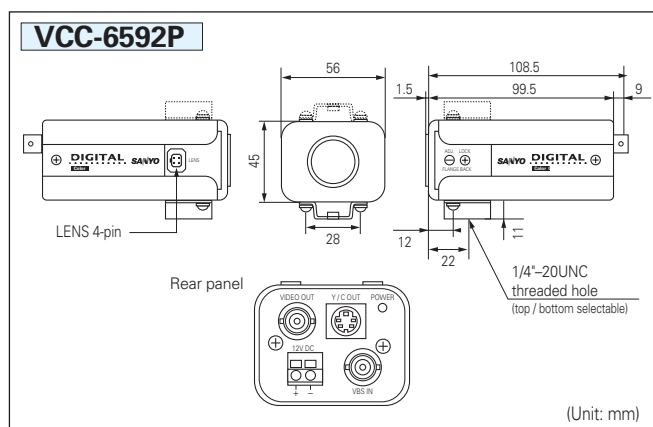
Camera · Lens

DVR

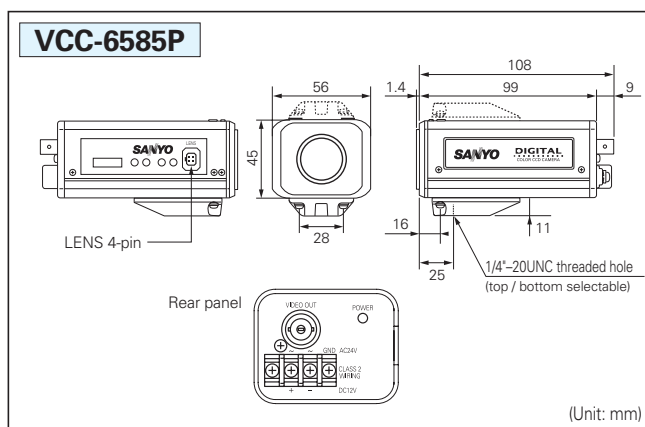
SSP System

Monitor

Example System



(Unit: mm)



(Unit: mm)

MODEL	VCC-6592P	VCC-6585P
Scanning system	PAL standard 625 lines, 25 frames/sec.	PAL Standard 625 Lines, 50 fields/sec.
Image sensor	1/3" (approx. 4.8 mm x 3.6 mm) interline transfer method CCD	1/3" (approx. 4.8 mm x 3.7 mm) interline transfer method CCD
Picture elements	Total: 795(H) x 596(V), Effective: 752(H) x 582(V)	
Horizontal resolution	More than 520 TV lines	
Minimum illumination	50IRE: 0.6 lx (Gain NORM) / 0.3lx (Gain HIGH) with F1.2 lens 20IRE: 0.24 lx (Gain NORM) / 0.12 lx (Gain HIGH) with F1.2 lens	1.0 lx (Gain NORM) / 0.5lx (Gain HIGH) with F1.2 lens 0.4 lx (Gain NORM) / 0.2lx (Gain HIGH) with F1.2 lens
Video output level	1.0 V (p-p) (75 Ω, composite)	1.0 V (p-p) (75 Ω, composite)
Video S/N ratio	More than 50 dB (AGC OFF)	
Backlight compensation	ON / OFF — DIP SW (side), ON = Multi-spot photometry (64-section) / Center-zone photometry — DIP SW (side) (activated when auto iris lens used)	ON / OFF — Slide SW, ON = Multi-spot photometry (2-mode) / Center-zone photometry (activated when auto iris lens used)
White-balance	ATW / Manual — DIP SW (side)	ATW / Manual — Slide SW
Auto gain control	Normal (NORM) / High (HIGH) — DIP SW (side)	NORMAL / HIGH — Slide SW
Electronic shutter	7-Mode: 1/50, 1/120, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec. — DIP SW (side)	—
Light control	Optical auto iris lens / Electronic iris (indoor use)	Auto iris / Electronic iris
Lens mount	CS mount (C mount: using C-mount adaptor supplied)	
Flange back	12.5 mm ±0.5 mm adjustment	
Auto iris lens	DC / VIDEO — Slide SW (side) DC: Drive coil (+, -), Brake (Damp) coil (+, -) VIDEO: +12 V DC (Max. 50 mA), Video output (1.0 V p-p, high impedance)	DC type DC: Drive coil (+, -), Brake (Damp) coil (+, -)
Auto iris output	LEVEL: L to H — VR (side)	
Lens iris level	LEVEL: L to H — VR (side)	
Electronic iris	ON (EI) / OFF (AI) 1/50 to 1/100,000SEC — DIP SW (side)	1/50 sec to 1/10,000 sec, ON / OFF — Slide SW
Electronic iris range	Approx.0.6 to 35,000 lx (with F1.2 lens, AGC: normal)	1.0 to 50,000 lx (with F1.2 lens) (GAIN NORM), 0.5 to 50,000 lx (with F1.2 lens) (GAIN HIGH)
Synchronizing system	Internal sync / External sync. (automatic switching)	Internal sync. / Line lock — Slide SW
V phase adjustment	LINE PHASE — VR	
Video signal	VIDEO OUT — BNC (rear)	VIDEO OUT — BNC
S-Video	Y/C OUT — Mini DIM 4-pin (rear)	—
External sync	VBS IN — BNC (rear)	—
Auto iris lens	LENS — 4-pin (side)	LENS — 4-pin (side)
Power supply	12 V DC — Pushbutton terminal x 2 (rear)	24V AC, GND — 3-pin terminal (rear), 12 V to 15 V DC — 2-pin terminal (rear)
Operating conditions	Temperature: -10°C to 50°C [+14° to 122°F], Humidity: within 90% RH	
Storage conditions	Temperature: -20°C to 70°C [-4° to 158°F], Humidity: within 70% RH	
Power requirement	12 V to 15 V DC	24 V AC ±10%, 50 Hz or 12 V to 15 V DC
Power consumption (approx.)	2.7 W	3.6 W
AC Adaptor	Not included	
Camera mount	1/4"-20 UNC (top / bottom selectable)	
Dimensions (approx.)	56(W) x 45(H) x 99.5(D) mm [2.2(W) x 1.77(H) x 3.92(D) in.]	56(W) x 45(H) x 99(D) mm [2.21(W) x 1.77(H) x 3.9(D) in.] (without lens camera & lens mounts)
Weight (approx.)	310 g [10.9 oz.] (without lens)	280 g [9.9 oz.] (without lens)

NOTE: Specifications subject to change without notice

1/3" Color CCD High-resolution Camera

VCC-6580P



Shown with optional lens

520
TV LinesMinimum
illumination
0.5 lxCenter-zone
BLCATW
ManualInternal sync.
Line lockElectronic
shutterDC
auto iris lens220V to
230V AC

1/3" Color CCD High-resolution Camera

VCC-5885P



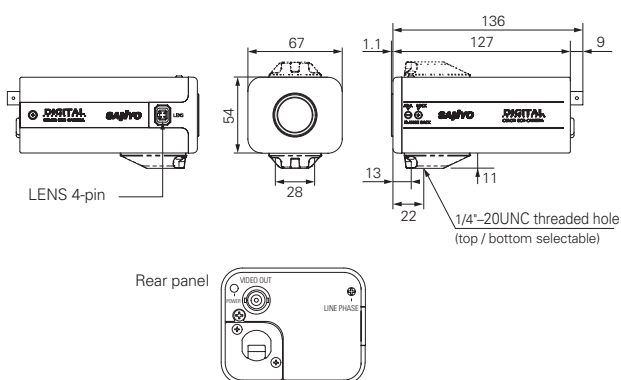
Shown with optional lens

520
TV LinesMinimum
illumination
1.0 lxCenter-zone
BLC

ATW

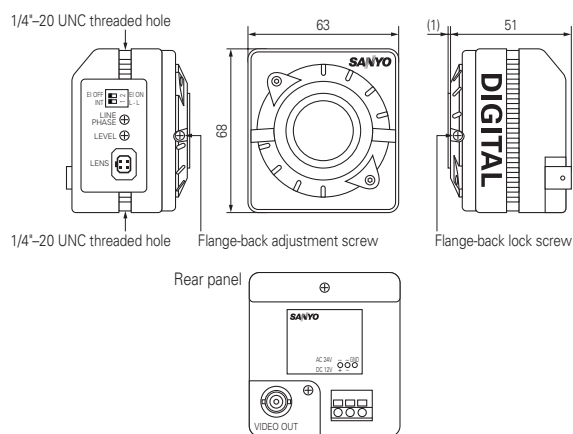
Internal sync.
Line lockDC
auto iris lens24V AC
12V to
15V DC

VCC-6580P



(Unit: mm)

VCC-5885P



(Unit: mm)

MODEL	VCC-6580P	VCC-5885P
Scanning system	PAL Standard 625 Lines, 50 fields/sec.	
Image sensor	1/3" (approx. 4.8 mm x 3.7 mm) interline transfer method CCD	
Picture elements	Total: 795(H) x 596(V), Effective: 752(H) x 582(V)	
Horizontal resolution	More than 520 TV lines	
Minimum illumination	50IRE 1.0 lx (Gain NORM) / 0.5lx (Gain HIGH) with F1.2 lens	1.0 lx (F1.2)
20IRE	0.4 lx (Gain NORM) / 0.2lx (Gain HIGH) with F1.2 lens	0.4 lx (F1.2)
Video output level	1.0 V (p-p) (75 Ω , composite)	
Video S/N ratio	More than 50 dB (AGC OFF)	
Backlight compensation	ON / OFF — Slide SW, ON = Multi-spot photometry (2-mode) / Center-zone photometry (activated when auto iris lens used)	ON / OFF — Slide SW ON = Center-zone photometry — (activated when auto iris lens used)
White-balance	ATW / Manual — Slide SW	ATW
Gain control	NORMAL / HIGH — Slide SW	ON / OFF
Electronic shutter	8-mode: 1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec. — Slide SW	
Light control	Auto iris / Electronic iris	Optical auto iris lens / Electronic iris (indoor use)
Lens mount	CS / C mount (C mount: using C-mount adaptor, sold separately)	CS mount (top / bottom selectable)
Flange back	12.5 mm \pm 0.5 mm adjustment	
Auto iris lens	DC type	
Auto iris output	DC: Drive coil (+, -), Brake (Damp) coil (+, -)	
Lens iris level	LEVEL: L to H — VR (side)	
Electronic iris	1/50 sec to 1/10,000 sec, ON / OFF — Slide SW	ON / OFF — Slide SW
Electronic iris range	1.0 to 50,000 lx (with F1.2 lens) (GAIN NORM), 0.5 to 50,000 lx (with F1.2 lens) (GAIN HIGH)	1.4 lx to 50,000 lx (F1.2)
Synchronizing system	Internal sync. / Line lock — Slide SW	Internal sync. / Line lock — Slide SW
V phase adjustment	LINE PHASE — VR	
Sockets	VIDEO OUT — BNC	
Video signal	LENS — 4-pin	
Auto iris lens	24 V AC, GND — Push button terminal x 3 (rear)	
Power supply	12 V to 15 V DC — Push button terminal x 2 (rear)	
Environmental conditions	Temperature: -10°C to 50°C [14°F to 122°F], Humidity: within 90% RH	
Operating Storage	Temperature: -20°C to 70°C [-4°F to 156°F], Humidity: within 70% RH	
Power requirement	220 V to 230 V AC, 50 Hz	24 V AC \pm 10%, 50 Hz or 12 V to 15 V DC
Power consumption (approx.)	3.6 W	
Camera mount	1/4"-20 UNC (top / bottom selectable)	
AC adaptor	Not included	
Dimensions (approx.)	67(W) x 54(H) x 127(D) mm [2.64(W) x 2.13(H) x 5.0(D) in.] (without lens camera & lens mounts)	63(W) x 68(H) x 51(D) mm [2.48(W) x 2.68(H) x 2.01(D) in.] (without lens mount)
Weight (approx.)	600 g [21.16 oz.] (without lens)	160 g [5.6 oz.] (without lens)

NOTE: Specifications subject to change without notice

1/4" Color CCD Camera

VCC-4115PA

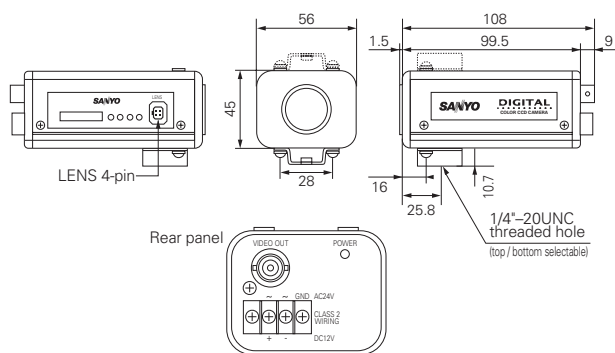
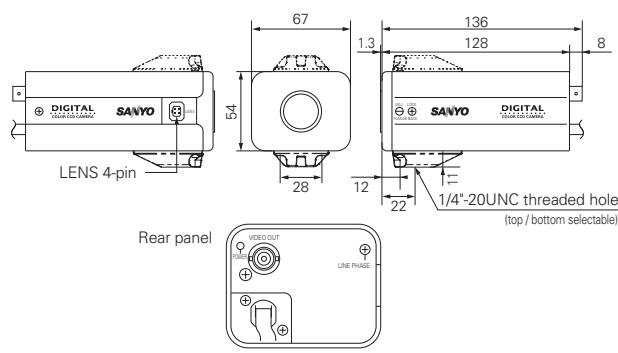
Shown with optional lens

350
TV LinesMinimum
illumination
0.3 lxMulti-spot /
Center-zone
BLC**ATW**
ManualInternal sync.
Line lockDC
auto iris lens24V AC
12V to
15V DC

1/4" Color CCD Camera

VCC-4110P

Shown with optional lens

350
TV LinesMinimum
illumination
0.3 lxMulti-spot /
Center-zone
BLC**ATW**
ManualInternal sync.
Line lockDC
auto iris lens220V to
230V AC**VCC-4115PA****VCC-4110P**

MODEL	VCC-4115PA	VCC-4110P
Scanning system	PAL standard 625 lines, 50 fields/sec.	
Image sensor	1/4" (approx. 3.6 mm x 2.7 mm) interline transfer method CCD	
Picture elements	Total: 537(H) x 597(V), Effective: 500(H) x 582(V)	
Horizontal resolution	More than 350 TV lines	
Minimum illumination (approx.)	0.3 lx (F1.2)	
Faceplate illumination	0.12 lx (F1.2)	
Video output level	1.0 V (p-p) (75 Ω, composite)	
Video S/N ratio	More than 50 dB (AGC off)	
Backlight compensation	ON / OFF — Slide SW, ON = Multi-spot photometry (64-section) / Center-zone photometry (Activated when auto iris lens used)	
White-balance	ATW / Manual — Slide SW	
Color adjust. at manual	R, B — VR	
Gain control	NORMAL / HIGH — Slide SW	
Light control	Optical auto iris lens / Electronic iris (indoor use)	
Lens mount	CS / C mount (C mount: using C-mount adaptor, sold separately)	
Flange back	12.5 mm ±0.5 mm adjustment	
Auto iris lens	DC	
Auto iris output	DC: Drive coil (+, -), Brake (Damp) coil (+, -)	
Lens iris level	LEVEL: L to H — VR	
Electronic iris	ON / OFF — Slide SW	
Electronic iris range	0.9 lx to 45,000 lx (F1.2)	
Synchronizing system	Internal sync. / Line lock — Slide SW	
V phase adjustment	LINE PHASE — VR	
Sockets	VIDEO OUT — BNC	
Video signal	LENS — 4-pin	
Auto iris lens	24 V AC, GND — 3-pin terminal (rear), 12 V to 15 V DC — 2-pin terminal (rear)	
Power supply	24 V AC ±10%, 50 Hz or 12 V to 15 V DC	
Operating conditions	Temperature: -10°C to 50°C [+14° to 122°F], Humidity: within 90% RH	
Storage	Temperature: -20°C to 70°C [-4° to 158°F], Humidity: within 70% RH	
Power requirement	2.8 W (with auto iris lens), 2.2 W (without auto iris lens)	
Power consumption (approx.)	220 V to 230 V AC, 50 Hz	
AC adaptor	3.0 W (with auto iris lens), 2.2 W (without auto iris lens)	
Camera mount	1/4"-20 UNC (top / bottom selectable)	
Dimensions (approx.)	56(W) x 45(H) x 99.5(D) mm [2.2(W) x 1.77(H) x 3.92(D) in.] (without camera & lens mounts)	
Weight (approx.)	280 g [9.9 oz.] (without lens)	

NOTE: Specifications subject to change without notice

1/3" B/W CCD High-resolution Camera

VCB-3385P / VCB-3380P



Shown with optional lens

570
TV LinesMinimum
illumination
0.07 lxCenter-zone
BLCInternal sync.
Line lock
for VCB-3380PInternal sync.
External sync.
Line lock
for VCB-3385PElectronic
shutterDC / VIDEO
auto iris lens24V AC
12V to 15V DC
for VCB-3385P220V to
240V AC
for VCB-3380P

1/3" B/W CCD High-sensitivity Camera

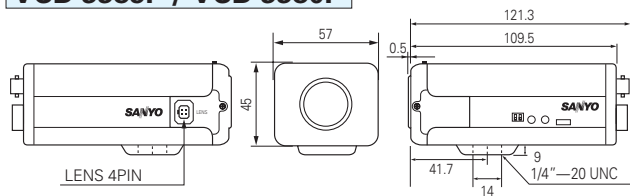
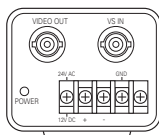
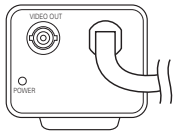
VCB-3455P / VCB-3450P



Shown with optional lens

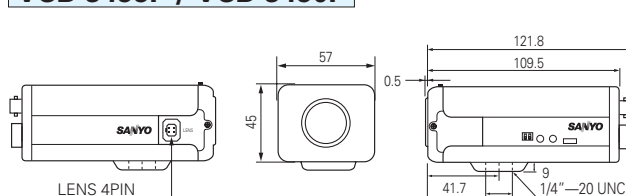
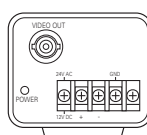
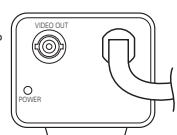
400
TV LinesMinimum
illumination
0.05 lxCenter-zone
BLCInternal sync.
Line lockElectronic
shutterDC / VIDEO
auto iris lens24V AC
12V to 15V DC
for VCB-3455P220V to
230V AC
for VCB-3450P

VCB-3385P / VCB-3380P

Rear panel
for VCB-3385PRear panel
for VCB-3380P

(Unit: mm)

VCB-3455P / VCB-3450P

Rear panel
for VCB-3455PRear panel
for VCB-3450P

(Unit: mm)

MODEL	VCB-3385P	VCB-3380P	VCB-3455P	VCB-3450P
Scanning system	CCIR standard 625 lines, 50 fields/sec.			
Image sensor	1/3" (approx. 4.8 mm x 3.6 mm) interline transfer method CCD		1/3" (approx. 4.9 mm x 3.7 mm) interline transfer method CCD	
Picture elements	Total: 795(H) x 596(V), Effective: 752(H) x 582(V)		Total: 537(H) x 597(V), Effective: 500(H) x 582(V)	
Horizontal resolution	570 TV lines		400 TV lines	
Minimum illumination	50IRE 0.07 lx (F1.2)		0.05 lx (F1.2)	
	20IRE 0.028 lx (F1.2)		0.02 lx (F1.2)	
Video output level	1.0 V (p-p) (75 Ω, composite)			
Video S/N ratio	More than 50 dB			
Backlight compensation	ON / OFF — Slide SW, Center-zone photometry (activated when auto iris lens used)			
Gain control	ON / OFF		Automatic	
Electronic shutter	8-mode: 1/50, 1/120, 1/500, 1/1000, 1/2000, 1/5000, 1/10000, 1/100000 sec — Slide SW			
Light control	Optical auto iris lens / Electronic iris (indoor use)			
Lens mount	CS mount			
Flange back	12.5 mm ±0.5 mm adjustment			
Auto iris lens	DC / VIDEO — Slide SW		EI / DC / VIDEO — Slide SW	
Auto iris output	DC: Drive coil (+, -), Brake (Damp) coil (+, -)			
	VIDEO: +12 V DC (Max. 50 mA), Video signal (hi-Z), GND		VIDEO: +10 V DC (Max. 50 mA), Video signal (hi-Z), GND	
Lens iris level	LEVEL: L to H — VR			
Electronic iris	ON / OFF — Slide SW		1/50 sec to 1/10,000 sec, ON / OFF — Slide SW	
Electronic iris range			0.05 lx to 30,000 lx (F1.2)	
Synchronizing system	Internal sync. / Line lock (manual switching) External sync. (automatic switching)	Internal sync. / Line lock (manual switching)	Internal sync. / Line lock — Slide SW	
V phase adjustment	LINE PHASE — VR			
Sockets	VIDEO OUT — BNC			
Video signal				
External sync.	VS IN — BNC			
Auto iris lens	LENS — 4-pin			
Power supply	GND — 3-pin terminal (rear)	Power cord (rear)	24 V AC, GND — 3-pin terminal (rear), 12 V DC — 3-pin terminal (rear)	Power cord (rear)
Environmental conditions	Temperature: -10°C to 50°C [14°F to 122°F], Humidity: within 90% RH			
Operating Storage	Temperature: -20°C to 70°C [-4°F to 158°F], Humidity: within 70% RH		Temperature: -20°C to 60°C [-4°F to 140°F], Humidity: within 70% RH	
Power requirement	24 V AC ±10%, 50 Hz or 12 V to 15 V DC	220 V to 240 V AC, 50 Hz	24 V AC ±10%, 50 Hz or 12 V to 15 V DC	220 V to 230 V AC, 50 Hz
Power consumption (approx.)	3.0 W	3.5 W	3.0 W	3.5 W
AC Adaptor	Not included		Not included	
Camera mount	1/4"– 20 UNC (top / bottom selectable)			
Dimensions (approx.)	57(W) x 45(H) x 121.5(D) mm [2.2(W) x 1.8(H) x 4.8(D) in.] (without camera & lens mounts)		57(W) x 45(H) x 109.5(D) mm [2.2(W) x 1.8(H) x 4.3(D) in.] (without lens camera & lens mounts)	
Weight (approx.)	245 g [11.6 oz.] (without lens)	490 g [17.3 oz.] (without lens)	245 g [8.6 oz.] (without lens)	490 g [17.3 oz.] (without lens)

NOTE: Specifications subject to change without notice

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera - Lens

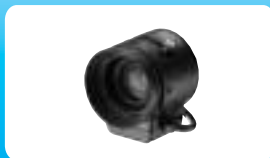
DVR

SSP System

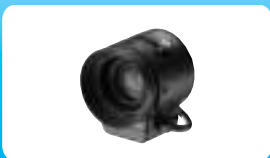
Monitor

Example System

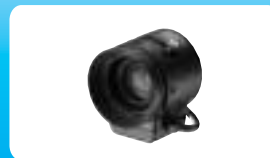
**Wide-angle IR Lens
for 1/3" CCD Camera
VA-13FG04IR**



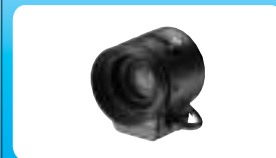
**Wide-angle IR Lens
for 1/3" CCD Camera
VA-13FG06IR**



**Wide-angle IR Lens
for 1/3" CCD Camera
VA-13FG08IR**

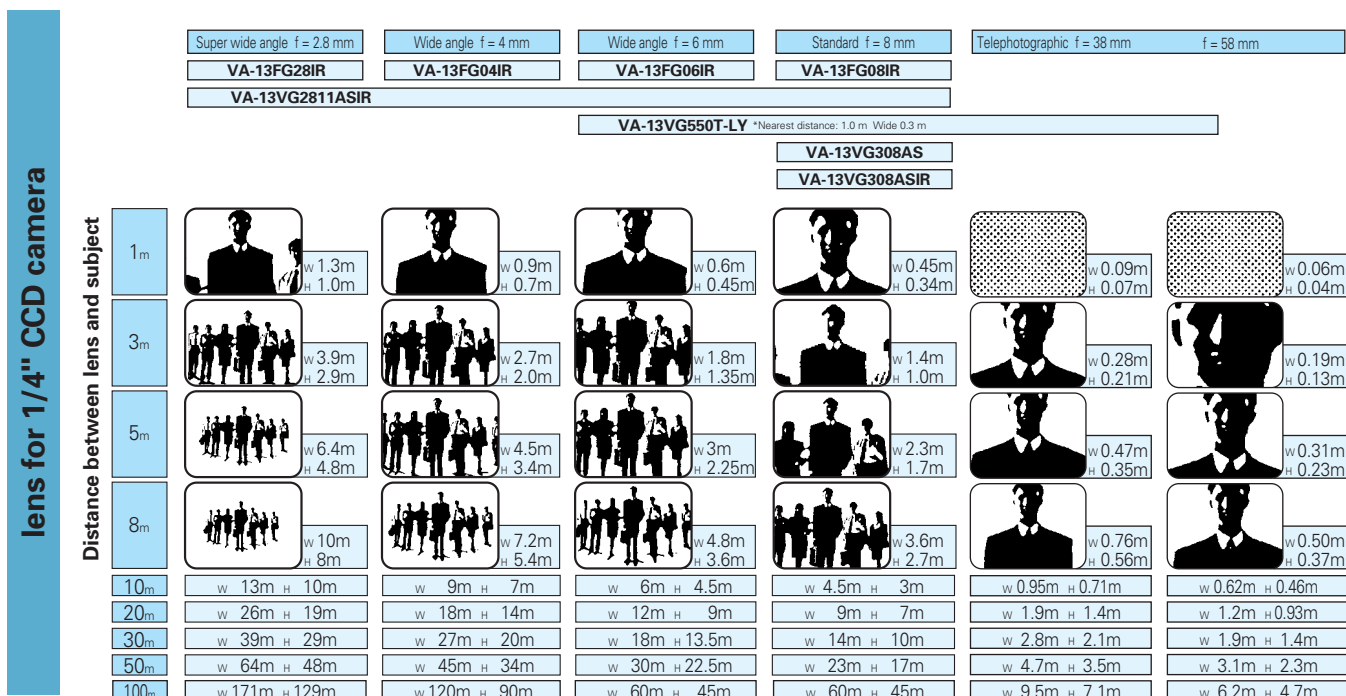


**Super Wide-angle IR Lens for
1/3" CCD Camera
VA-13FG28IR**



Application	1/3" CCD camera	1/3" CCD camera	1/3" CCD camera	1/3" CCD camera
Mounting system	CS mount	CS mount	CS mount	CS mount
EE AMP	not equipped	not equipped	not equipped	not equipped
Focal length	f = 4.0 mm	f = 6.0 mm	f = 8 mm	f = 2.8 mm
Max. caliber rate	F1.2	F1.2	F1.2	F1.2
Horizontal shooting angle	1/3" = 65.6°, 1/4" = 49.7°	1/3" = 46.5°, 1/4" = 34.6°	1/3" = 46.5°, 1/4" = 34.6°	1/3" = 93.2°, 1/4" = 70.7°
Vertical shooting angle	1/3" = 49.7°, 1/4" = 37.4°	1/3" = 34.6°, 1/4" = 25.9°	1/3" = 34.6°, 1/4" = 25.9°	1/3" = 70.7°, 1/4" = 53.4°
Nearest distance	0.2 m	0.2 m	0.2 m	0.2 m
Iris connecting plug	4-pin	4-pin	4-pin	4-pin
External dimensions	34(W) x 45.7(H) x 35.4(D) mm	34(W) x 45.7(H) x 35.4(D) mm	34(W) x 45.7(H) x 35.4(D) mm	34(W) x 45.7(H) x 35.4(D) mm
Weight (approx.)	40 g [1.4 oz.]	44 g [1.6 oz.]	44 g [1.6 oz.]	44 g [1.6 oz.]

Image Range at a Glance



Technical Notes

Formula for determining the minimum subject illumination for different F value

The amount of light passed through a lens is expressed by a value called "aperture value" (F value or F number). When the aperture is fully open (maximum aperture), the maximum amount of light is passed through the lens. This is the lens' brightness and is expressed by the "maximum aperture F value". The maximum aperture F value is obtained by dividing the focal length with the lens diameter (D). The capital letter "F" is used to distinguish it from "f", which means the focal length.

$$\text{Standard minimum subject illumination} \times \left(\frac{\text{Target F value}}{\text{Lens F value used for measurement}} \right)^2$$

Example:

For a lens of F1.2, use the value of 1.0 lx which is obtained by actual measurement.

When using a lens of F1.4:

$$1.0 \times \left(\frac{1.4}{1.2} \right)^2 = 1.4 \text{ lx}$$

When using a lens of F1.6:

$$1.0 \times \left(\frac{1.6}{1.2} \right)^2 = 1.8 \text{ lx}$$

$$F = \frac{f}{D}$$

SANYO defines the minimum subject illumination to be the level that produces the signal level of 50 IRE in measuring camera performance.

For the comparison of the minimum subject illumination:

Always confirm the F value and the IRE level used in the measurement. If the F value and the IRE level do not match, then convert the values in camera specifications using the following method.

F1.2, 50IRE 1.0 lx	→	F1.4, 50IRE	$1.0 \times \left(\frac{1.4}{1.2} \right)^2 = 1.4 \text{ lx}$
		F1.4, 20IRE	$1.4 \times \frac{20}{50} = 0.56 \text{ lx}$
	→	F1.6, 50IRE	$1.0 \times \left(\frac{1.6}{1.2} \right)^2 = 1.8 \text{ lx}$
		F1.6, 20IRE	$1.8 \times \frac{20}{50} = 0.56 \text{ lx}$

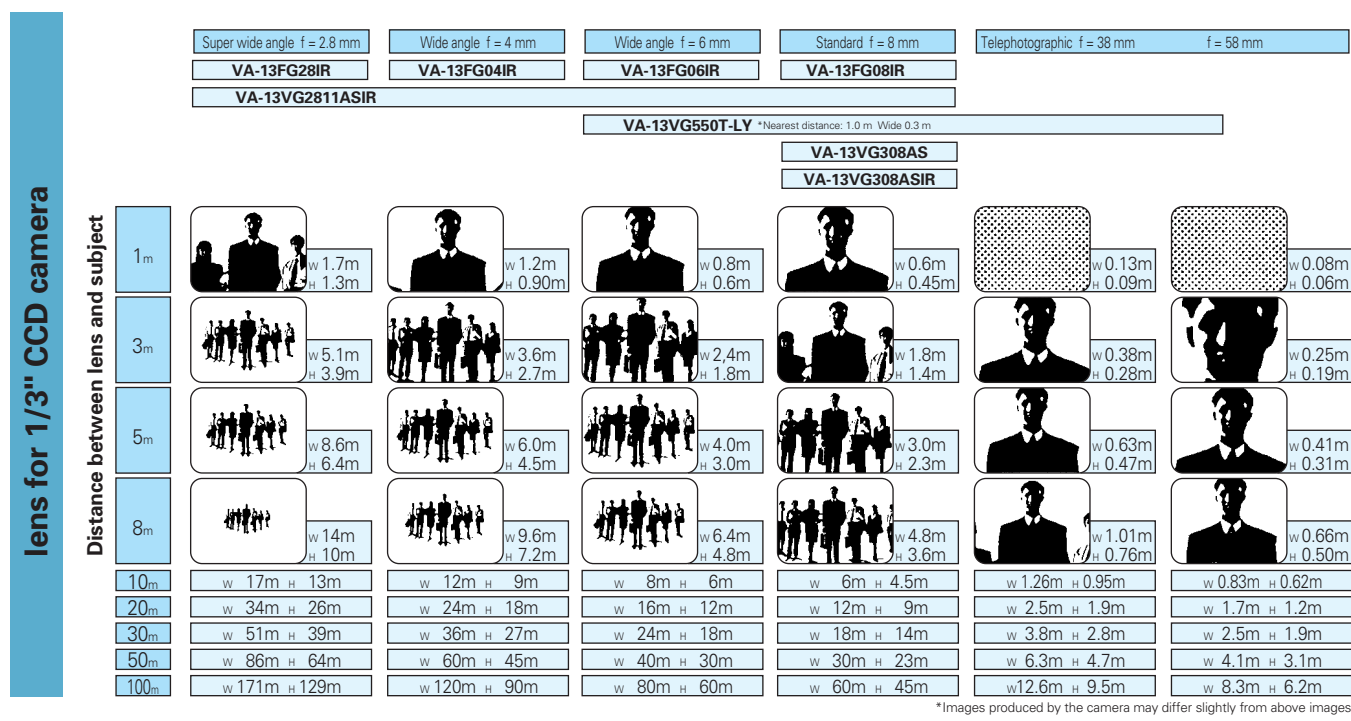
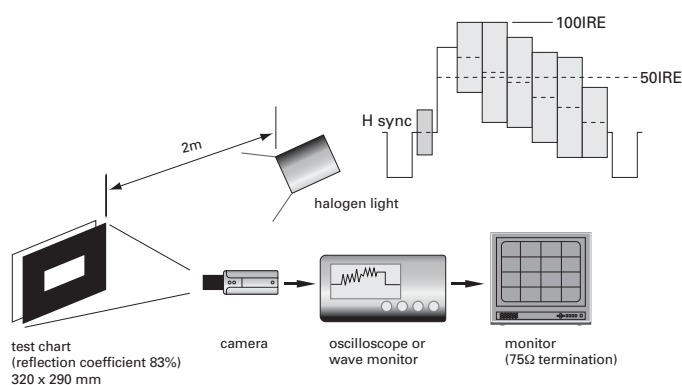
**Standard Vari-focal IR Lens for
1/3" CCD Camera
VA-13VG2811ASIR**

**Standard Vari-focal IR Lens for
1/3" CCD Camera
VA-13VG308ASIR**

**Tele Vari-focal Lens for
1/3" CCD Camera
VA-13VG550T-LY**

**Standard Vari-focal Lens for
1/3" CCD Camera
VA-13VG308AS**


Application	1/3" CCD camera	1/3" CCD camera	1/3" CCD camera	1/3" CCD camera
Mounting system	CS mount	CS mount	CS mount	CS mount
EE AMP	not equipped	not equipped	not equipped	not equipped
Focal length	f = 2.8 to 11 mm	f = 3.0 to 8 mm	f = 5 to 50 mm	f = 3.0 to 8 mm
Max. caliber rate	F1.4 to 2.6	F1.2	F1.4 to 2.0	F1.2
Horizontal shooting angle	1/3" = 97.4 to 26.2°, 1/4" = 72.4 to 19.7°	34.8°	66.8°	34.8°
Vertical shooting angle	1/3" = 72.4° to 19.7°, 1/4" = 54.0 to 14.7°	26.0°	40.3°	26.0°
Nearest distance	0.3 m	0.3 m	Tele 1.0 m Wide 0.3 m	0.3 m
Iris connecting plug	4-pin	4-pin	4-pin	4-pin
External dimensions	52.5(W) x 64.6(H) x 40(D) mm	55.6(W) x 44.2(H) x 49.3(D) mm	41.0(W) x 53.7(H) x 59.2(D) mm	55.6(W) x 44.2(H) x 49.3(D) mm
Weight (approx.)	79 g [2.8 oz.]	67 g [2.4 oz.]	95 g [3.4 oz.]	67 g [2.4 oz.]

Image Range at a Glance

Measurement Circuit:


A full-screen shot of the test chart

Adjust the level so that the white portion in the middle of the test chart is set to 100 IRE.

Reduce the light until the signal of the white portion drops to 50 IRE and measure the luminous intensity.

Image Range Formula

Combination of 1/4" CCD camera and lens

- Width (m) of subject that can be shot = $\frac{3.6 \times L}{f}$
- Height (m) of subject that can be shot = $\frac{2.7 \times L}{f}$

Combination of 1/3" CCD camera and lens

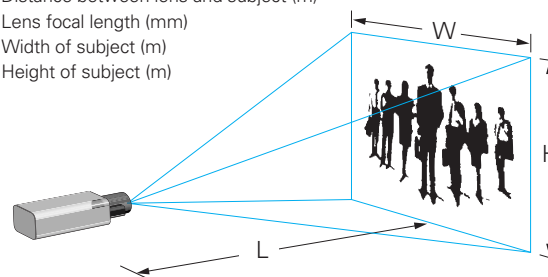
- Width (m) of subject that can be shot = $\frac{4.8 \times L}{f}$
- Height (m) of subject that can be shot = $\frac{3.6 \times L}{f}$

L : Distance between lens and subject (m)

f : Lens focal length (mm)

W : Width of subject (m)

H : Height of subject (m)



*Actual shooting range may be smaller due to TV over scanning.

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera - Lens

DVR

SSP System

Monitor

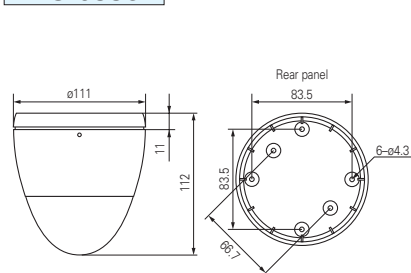
Example System

Dummy Dome-shaped Camera VC-0996



- Ideal for a location requiring many cameras.
- Simply installing dummy cameras helps prevent crime.

VC-0996



(Unit: mm)

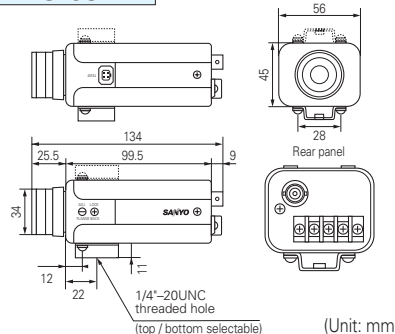
Dummy Camera VC-0924



with dummy lens

- Ideal for a location requiring many cameras.
- Simply installing dummy cameras helps prevent crime.

VC-0924



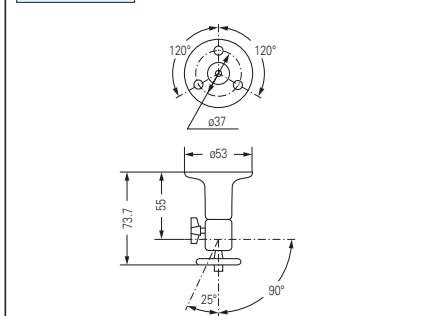
(Unit: mm)

Camera Mount Base VCT-92



- Maximum turning angle 360° horizontally and 115° vertically
- Maximum bearing weight 1.5 kg

VCT-92



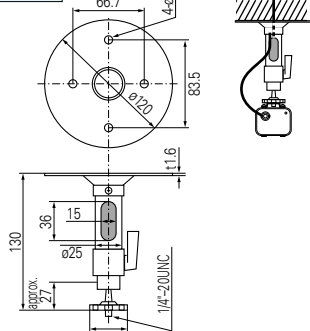
(Unit: mm)

Camera Mount VCT-31



- Possible to guide cable through pipe
- Maximum turning angle 360° horizontally and 105° vertically
- Maximum bearing weight 4 kg

VCT-31



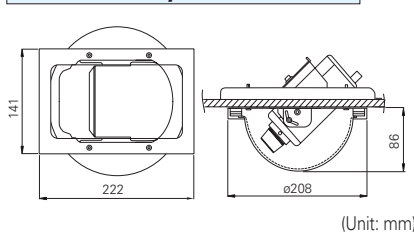
(Unit: mm)

Dome Camera Housing

VA-CDH60 (Smoked cover) VA-CDH60C (Clear cover)



VA-CDH60 / VA-CDH60C



(Unit: mm)

MODEL	VA-CDH60 / VA-CDH60C
Materials	Zinc plated metal and ABS plastic
Environmental condition	Temperature: -10°C to 50°C [14°F to 122°F], Humidity: within 90% RH
Dimensions	approx $\phi 208$ x 86 (H) mm
Weight (approx.)	900 g [31.7 oz.]
Accessories	M3 x 30 mm bolt(4) 1/4" -20 UNC x 12 mm(1)

*Specifications subject to change without notice

Camera Control Unit VAC-70



Optional Accessory

The control unit allows the user to change camera settings.

MODEL	VAC-70
Video output terminal	BNC x 1
Camera input terminal	BNC x 1
Environmental conditions	Temperature: -10°C to 50°C [14°F to 122°F], Humidity: 10 to 80%
Power requirement	3V DC, 2 AA / LR6 / 1.5 V batteries
Dimensions	80(W) x 40(H) x 140(D) mm [3.2(W) x 1.6(H) x 5.5(D) in.]
Weight (approx.)	230 g [8.1 oz.] (without batteries)

NOTE: Specifications subject to change without notice

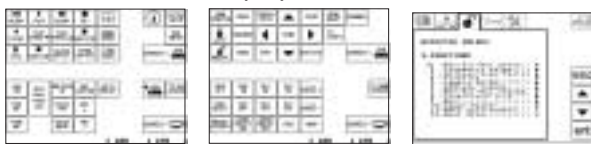
SSP System Controller VSP-9000



Backlit LCD with a touch screen (VSP-9000)

The 320 x 240 LCD screen installed on the front panel also serves as a touch panel. Settings, operation, and control of even a large-scale system can be done by touching the screen and displaying the menu. The touch panel offers easy access to otherwise complicated settings and operations.

Touch the buttons displayed on the screen



The display changes at each touch

- The menus and sub menus can be set by pressing the keys represented by the icons

Simple Keystrokes on the VSP-8500 Controls DVRs and PTZ Cameras

Customization of up to 26 user maps (VSP-9000)

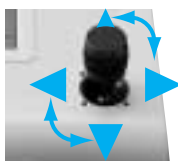
The VSP-9000 LCD touch panel simplifies the operation of today's increasingly complex medium- to large-scale security systems. • User maps can easily be designed by PC GUI and uploaded on the VSP-9000 through RS-232

40 free configurable macro-function keys for each map (VSP-9000)

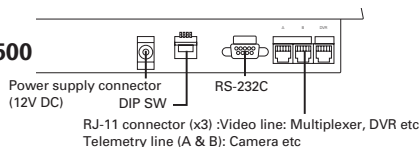
Allows the operator to control individual devices by assigning an address to each device.

Telemetry control using 3-axis joystick (Pan/Tilt/Zoom)

To control digital video recorders, cameras, and other devices, the VSP-9000 / VSP-8500 controller is equipped with a 3-axis joystick. The joystick guarantees easy operation from a remote location.



VSP-9000 / VSP-8500 rear panel



SSP System Controller VSP-8500

New


SSP devices

Cameras

1/4" Color CCD High-resolution AF Zoom Camera
VCC-ZM300PA

1/4" Color CCD High-resolution AF Zoom Camera
VCC-ZM400P DAY NIGHT

1/4" Color CCD High-resolution AF Speed Dome Camera
VCC-9800P DAY NIGHT /

VCC-9600P DAY NIGHT

VCC-9700P / VCC-9500P

1/4" Color CCD High-resolution
Weatherproof AF Zoom Camera
VCC-XZ400P DAY NIGHT

PAN-FOCUS

1/4" Color CCD High-resolution
Weatherproof Zoom Camera
VCC-XZ200P+VA-20ST

1/4" Color CCD High-resolution
Vandal-resistant PT Dome Camera
VDC-DP9585P

1/4" Color CCD High-resolution
PT Indoor mini Dome Camera
VCC-P9575P

1/4" Color CCD High-resolution
Vandal-resistant Dome Camera
VDC-DP7585P+VA-50ST

1/4" Color CCD High-resolution
Indoor mini Dome Camera
VCC-P7575PA+VA-50ST

Recorders

1ch Digital Video Recorder **DSR-M810PA**

4ch Digital Video Recorder **DSR-M814PA**

1ch Digital Video Recorder
with VZU-COM300 **DSR-300P**

6ch Digital Video Recorder **DSR-3706PA**

9ch Digital Video Recorder **DSR-3709PA**

16ch Digital Video Recorder **DSR-3716PA**

9ch Digital Video Recorder **DSR-5009PA**

16ch Digital Video Recorder **DSR-5016PA**

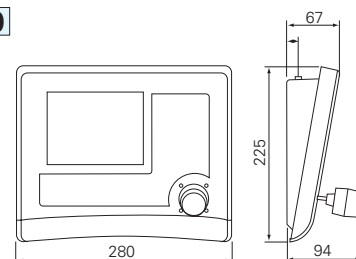
9ch Digital Video Recorder **DSR-5709P**

16ch Digital Video Recorder **DSR-5716P**

Matrix Switcher

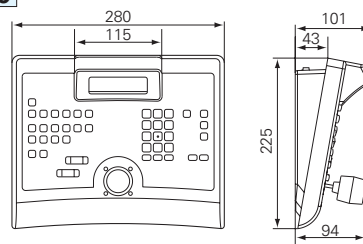
MPX-MX2005

VSP-9000



(Unit: mm)

VSP-8500



(Unit: mm)

MODEL	VSP-9000	VSP-8500
Communication method	RS-485, RS-422, RS-232C	
Communications Speed	2400, 4800, 9600, 19200 bps	
Control terminals	RJ-11: 3 ports, D-SUB 9pin:1	
Graphic display	320 x 240 pixels, backlit by white LED	4 lines backlit display
Menu language	English / French / German / Italian	English / French / German / Spanish / Italian / Japanese
No. of user maps	26 maps, 40 keys for each map	
No. of connectable devices	Controllers : Max 5, DVRs : Max 100 via VIDEO terminal Cameras : 127 via TELEMETRY A port, 127 via TELEMETRY B port Temperature: 5°C to 40°C [41°F to 104°F], Humidity 80% or less	
Operating conditions	PTZ dome camera : SANYO SSP, H-SSP, Mark Mercer, Videotec, Ernitec, Pelco-D, Sensormatic / American dynamics, VCL Cameras : SANYO SSP, H-SSP, Mark Mercer, Videotec, Ernitec, Pelco-D, Macro, Sensormatic, VCL DVR / MUX : SANYO, Videotec Video Matrix switcher : Videotec	
Power requirement (approx.)	12 V DC, 1A	
AC adaptor	Included	
Dimensions	280(W) x 94(H) x 225(D) mm [11.0(W) x 3.7(H) x 8.9(D) in.] (w/ 3-axis proportional joystick) (Graphic display: 115 x 86 mm) [4.5 x 3.4 in.]	280(W) x 100(H) x 225(D) mm [11.0(W) x 3.9(H) x 8.9(D) in.] (w/ 3-axis proportional joystick)
Weight (approx.)	900 g [31.7 oz.]	

NOTE: Specifications subject to change without notice

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera - Lens

DVR

SSP System

Monitor

Example System

Digital Video Recorder



Quality Digital Recording

DIGITAL
NETWORK SOLUTIONS

The DSR series utilizes JPEG2000, M-JPEG, and MPEG video compression methods to offer clear and sharp crispy video recording. Simultaneous recording and playback is now possible with elegantly smooth motion.

Network

Remote Control from a PC

Each unit in the DSR series features a Network terminal*. Monitoring live video, playing back and reviewing recordings, starting a new recording, searching for recorded images, camera control, camera setup — all operations are possible from a PC with a network connection (using Internet Explorer version 5.0 or newer). It also enables the user to download recorded video and audio on to the PC.

* DSR-300P requires communication board VZU-COM300.

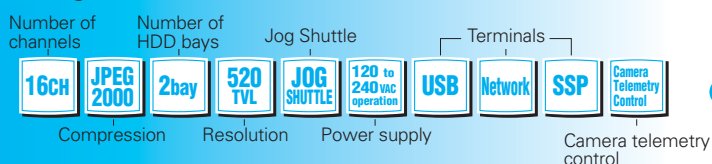
The DSR Series models use either JPEG2000, Motion JPEG or MPEG format, each of which has its own characteristics and advantages, so please select the DSR Series model most suitable for your requirements.

Characteristics of Video Compression

Model	Content	Characteristics
DSR-5009PA DSR-5016PA DSR-5709P DSR-5716P	Video using JPEG2000 compression	A high compression rate is achieved while eliminating block noise and pixelation associated with the JPEG format.
DSR-300P DSR-3706PA DSR-3709PA DSR-3716PA	Video using Motion JPEG compression	Motion pictures are produced by successive decompression-reproduction of frames recorded in JPEG format. Compared to MPEG, the compression rate is lower and the picture quality is higher.
DSR-M810PA DSR-M814PA	Video using MPEG-2 compression	The DSR-M81x series adopts MPEG-2 format, the de facto standard for color motion picture compression.
DSR-2004 DSR-2016 DSR-HB8000	Video using MPEG-4 compression	The MPEG-4 standard was designed to reproduce a wide range of moving pictures from those on a low speed communication line to those with high-definition TV picture quality.

Recorder Function Explanation

Legends



Digital Technology Offers Multi-functional Recording with Superior Picture Quality Networking for Remote and Round-the-Clock Surveillance

1 Multi-screen display

For both live picture monitoring (during multiplex recording) and playback of recorded pictures, the user can select from 16-screen display, 9-screen display, 4-screen display, and full-screen display.

- 4-screen display • Full-screen display
- Screen position assignment • Monitor masking

2 Jog Shuttle (* Also used to select menu options.) Jog dial

Simply by turning the Jog Dial with your finger to the left or right, the monitored images can be made to run forward or backwards for easy checking.

Shuttle ring

Simply by turning the Shuttle Ring to the left or right, you can switch from playback to forward or reverse playback, or forward or reverse search. From pause, you can switch to forward or reverse slow-motion playback, normal speed playback, or search. Operation of these functions is easy, allowing very efficient searching.

3 Built-in Motion Sensor

DSR series comes with a built-in motion sensor. Different settings can be made for each camera image independently. The sensor can detect moving objects within the screen by picking up changes in brightness. The user can use this feature to trigger an alarm recording.

*Does not apply to DSR-M810PA

4 Mirror Recording

DSR series both come with two HDD bays*. With two HDD's of the same capacity installed, it is possible to record the same video on both of them, thus allowing for a backup. * Does not apply to DSR-300P and DSR-2004

5 Timer recording

Uniform daily programming or independent programming for each day of the week are both available. Further, holidays can be entered by specifying the date and the month for which Sunday programming should be applied.

6 Alarm recording

When an alarm signal is received from an external sensor, the Recorder will automatically start recording in a mode predetermined by the user.

7 Alarm counter

This feature allows the user to keep and display records of the date and time of alarms.

8 Video loss alarm

When the video signal feed is lost due to one of the following reasons, a buzzer sounds and the word "VIDEO LOSS" is displayed on the screen.

1. Wire breakdown
2. Disconnection of video terminal
3. Loss of power on a camera or other intermediary equipment

9 Disk full alarm

During a recording, an alarm can be set to give off a buzzer sound, along with a message on the display.

10 Fan error / Disk error

A beep will sound when an error occurs on the fan or the disk.

11 Time / Date search

Searching recorded pictures is available by specifying the time and date.

12 Alarm search

A list of up to 8 stored recordings (alarm number, recording date and time) along with a preview window offers the user an easy way of searching and playing back a particular event. You can easily switch to a full screen display and display a still picture, or perform a fast-forward search simply by turning the shuttle or jog dial.

13 Alarm thumbnail search

It is possible to display up to 9 thumbnails for video recordings in the alarm area along with their respective alarm numbers. This feature allows the user to search for a particular event without playing back each recording.

14 Alarm log search

A search is narrowed using a log file by selecting the time, minute, month, and the day of the week on a GUI, and then the desired scene can be selected.

*Only DSR-5009PA, DSR-5016PA, DSR-5709P and DSR-5716P

15 Motion detection search

By setting a motion sensor on the screen, any scene with motion in the specified area will be brought up for further review.

*Does not apply to DSR-M810PA and DSR-M814PA

16 Archive area search

A list of up to 8 stored recordings (copied to archive area, recording date and time), along with a preview window, offers the user an easy way of searching and playing back a particular event. You can easily switch to a full screen display and show a still picture, or perform a fast-forward search simply by turning the shuttle or jog dial.

*Does not apply to DSR-M810PA, DSR-M814PA, DSR-2004, DSR-2016 and DSR-HB8000

17 Camera telemetry

The DVR front panel can be used to control connected cameras. *Does not apply to DSR-3706PA, DSR-300P, DSR-M810PA and DSR-M814PA

18 Clock adjustment

If multiple Recorders are used, using this feature forces timers on all machines to be synchronized to the master Recorder once a day at the preset time.

19 Security lock

To prevent unauthorized manipulation or accidental operation while recording, the user can lock the functionality of the operation buttons, the jog dial, and the shuttle ring. There are two types of security lock: a quick method security lock and a 4 digit security lock.

20 Auto Delete Function

The allows the user to specify the storage period for each video clip, from one day up to 99 days.

When the specified period expires, the data will be automatically deleted.

21 30-day memory back-up

A built-in lithium battery is used to protect various DVR settings for 30 days.

22 Lifetime counter

The monitor screen displays "used-time" counter (total power-on time.)

23 Buzzer

An alarm is indicated by a beep.

24 SMTP

An alarm can trigger an e-mail message sent to a preset address.

25 Series Connection

DSR series facilitates channel by channel series connection between multiple units through the connection of each channel's VIDEO IN/OUT terminals, along with the connection of the SERIES IN/OUT terminals. When the master DVR runs out of storage capacity, recording automatically switches to the second DVR and onward to enable unlimited expansion of storage capacity and recording time.

26 VGA output**USB USB terminal**

Useful in connecting an external disk writer and/or CF reader.

* Does not apply to DSR-300P

CF CF slot

Increases data portability and MENU downloading/uploading by allowing the use of a compact flash memory or a microdrive.

Network terminal













































There is a built-in 100BASE-TX / 10-BASE-T LAN terminal, allowing remote surveillance / control from PC via LAN.

SSP (RS-485/422) compatible

By using SSP (SANYO Security Serial Protocol), cameras, multiplexers, DVRs and VCRs in a daisy chain over a distance of up to 1200m (4000 feet) can be controlled centrally with just one controller.

RS-232C compatible

With RS-232C compatible recorders various operations are possible from an external computer.

Digital Video Recorder													
Model													
Hard Disk Capacity	Max HDD Capacity (Technically) per one bay											Max HDD Capacity	
	2TB	2TB	2TB	2TB	1TB	1TB	1TB	540GB	1TB	1TB	540GB	540GB	
Horizontal resolution	520 TVL	520 TVL	520 TVL	520 TVL	520 TVL	520 TVL	520 TVL	520 TVL	500 TVL	500 TVL	500 TVL	250 TVL	
Recording speed (IPS)	100	100	100	100	50	50	50	50	50 60	50 60	400 CIF 25 D1	100 CIF 25 D1	
Compression	JPEG2000	JPEG2000	JPEG2000	JPEG2000	M-JPEG	M-JPEG	M-JPEG	M-JPEG	MPEG-2	MPEG-2	MPEG-4	MPEG-4	
Pixel	720 x 288	720 x 288	720 x 288	720 x 288	720 x 288	720 x 288	720 x 288	720 x 288 720 x 576	720 x 576 720 x 480	720 x 576 720 x 480	704 x 576 704 x 288 352 x 288	704 x 576 352 x 288	
 Multi-screen display	4 / 9 / 16 -screen, Plus display	4 / 9-screen, Plus display	4 / 9 / 16 -screen, Plus display	4 / 9-screen, Plus display	4 / 9 / 16 -screen, Plus display	4 / 9-screen, Plus display	4 / 6-screen, Plus display	—	4 -screen	—	4 / 9 / 16 -screen	4 -screen	
 Jog Shuttle	✓	✓	✓	✓	✓	✓	✓	—	—	—	—	—	
 Built-in Motion Sensor	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	✓	✓	
 Mirror recording	✓	✓	✓	✓	✓	✓	✓	—	✓	✓	—	—	
 Timer recording	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
 Alarm recording	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
 Alarm counter	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	—	
 Video loss alarm	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
 Disk full alarm	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	—	
 Fan error / Disk error	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	— / ✓	— / ✓	
 Time / Date search	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
 Alarm search	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
 Alarm thumbnail search	✓	✓	✓	✓	✓	✓	✓	✓	—	—	—	—	
 Alarm log search	✓	✓	✓	✓	—	—	—	—	—	—	✓	✓	
 Motion detection search	✓	✓	✓	✓	✓	✓	✓	✓	—	—	—	—	
 Archive area search	✓	✓	✓	✓	✓	✓	✓	✓	—	—	—	—	
 Camera telemetry	✓	✓	✓	✓	✓	✓	—	—	—	—	✓	✓	
 Clock adjustment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	—	
 Security lock	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
 Auto Delete Function	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	
 30-day memory back-up	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
 Lifetime counter	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	—	
 Buzzer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
 SMTP	✓	✓	✓	✓	—	—	—	—	—	—	✓	✓	
 Series Connection	✓	✓	—	—	✓	✓	✓	✓	✓	✓	—	—	
 VGA output	✓	✓	—	—	—	—	—	—	—	—	✓	✓	
 USB terminal	✓	✓	✓	✓	✓	✓	✓	—	✓	✓	✓	✓	
 CF slot	—	—	✓	✓	✓	✓	✓	✓	—	—	—	—	
 Network terminal	✓	✓	✓	✓	✓	✓	✓	(Option) ✓	✓	✓	✓	✓	
 SSP (RS-485) compatible	✓	✓	✓	✓	✓	✓	✓	(Option) ✓	✓	✓	✓	—	
 RS-232C compatible	—	—	✓	✓	—	—	—	(Option) ✓	—	—	—	—	
Software	VA-SW5000 (packaged)	VA-SW5000 (packaged)	VA-SW5000 (packaged)	VA-SW5000 (packaged)	VA-SW5000 (packaged)	VA-SW5000 (packaged)	VA-SW5000 (packaged)	VA-SW5000 (supplied separately)	VA-SW300 (supplied separately)	VA-SW8000LITE (packaged) VA-SW8000 (sold separately)	VA-SW8000LITE (packaged) VA-SW8000 (sold separately)	DVR Utility 2016 (packaged)	DVR Utility 2004 (packaged)
Power source	120 V to 240V AC, 50/60 Hz	120 V to 240V AC, 50/60 Hz	120 V to 240V AC, 50/60 Hz	120 V to 240V AC, 50/60 Hz	120 V to 240V AC, 50/60 Hz	120 V to 240V AC, 50/60 Hz	120 V to 240V AC, 50/60 Hz	120 V to 240V AC, 50/60 Hz	Input 100 to 240V AC, 50/60 Hz Output 12 / 5 V DC (Packaged AC Adapter)	120 V to 240V AC, 50/60 Hz	120 V to 240V AC, 50/60 Hz	Input 100 V to 240 V AC, 50/60 Hz Output 12 V DC	Input 100 V to 240 V AC, 50/60 Hz Output 12 V DC
Power consumption	720 mA	720 mA	880 mA	880 mA	800 mA	800 mA	800 mA	13 W	600 mA	600 mA	90 w/12 V	25 w/12 V	
Dimensions (W x H x D) mm	420 x 96 x 365	420 x 96 x 365	420 x 96 x 365	420 x 96 x 365	420 x 96 x 365	420 x 96 x 365	420 x 96 x 365	420 x 96 x 365	210 x 86 x 380	210 x 86 x 391.5	210 x 86 x 391.5	432 x 89 x 349	350 x 65 x 260
Page	39	41	41	43	43	45	45	47	48	49	49	51	52

See pages 39 and 40 for DSR-HB8000.

**Optional
HDD**
(sold separately)

Recommendable for the following models.

DSR-HB8000 / DSR-5716P / DSR-5709P / DSR-5016PA / DSR-5009PA /
DSR-3716PA / DSR-3709PA / DSR-3706PA / DSR-300P / DSR-M814PA /
DSR-M810PA / DSR-2016 / DSR-2004

VA-HD3160 (160GB)
VA-HD3300 (300GB)
VA-HD3500 (500GB)

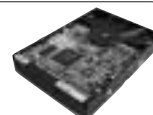


Table of recording rate and times

DSR-5716P / DSR-5709P							750 GB
Recording Speed		Picture Quality					Audio Recording
IPS	Recording Interval (sec.)	Basic 12 kB	Normal 16 kB VHS (EP)	Enhanced 24 kB VHS (SP)	Fine 32 kB S-VHS	Super Fine 40 kB S-VHS+	
Recording Time (unit: hour)							
100.00	0.01	130	102	71	53	42	
50.00	0.02	260	206	140	108	86	Available
25.00	0.04	518	413	281	213	10	
16.67	0.06	778	618	420	318	258	
12.50	0.08	1,038	825	560	425	342	
8.33	0.12	1,558	1,238	840	638	513	
6.25	0.16	2,077	1,647	1,121	851	683	
5.00	0.20	2,595	2,060	1,403	1,062	855	
4.17	0.24	3,112	2,471	1,680	1,272	1,025	
3.57	0.28	3,635	2,885	1,962	1,488	1,197	
3.13	0.32	4,145	3,293	2,238	1,695	1,365	
2.78	0.36	4,667	3,596	2,520	1,910	1,538	
2.50	0.40	5,190	4,122	2,802	2,123	1,710	
2.27	0.44	5,715	4,541	3,087	2,337	1,883	
1.92	0.52	6,758	5,367	3,650	2,765	2,225	
1.67	0.60	7,770	6,170	4,196	3,177	2,558	
1.47	0.68	8,827	7,010	4,767	3,611	2,907	Not available
1.32	0.76	9,830	7,805	5,307	4,020	3,237	
1.19	0.84	10,903	8,658	5,888	4,460	3,590	
1.09	0.92	11,903	9,453	6,428	4,871	3,920	
1.00	1	12,975	10,302	7,008	5,307	4,272	
0.50	2	25,950	20,607	14,013	10,616	8,546	
0.33	3	39,317	31,223	21,233	16,085	12,945	
0.25	4	51,898	41,216	28,025	21,233	17,088	
0.20	5	64,873	51,518	35,033	26,540	21,360	
0.10	10	129,747	103,035	70,062	53,078	42,723	
0.05	20	259,493	206,067	140,127	106,158	85,443	
0.03	30	432,490	343,448	233,546	176,928	142,406	

DSR-5016PA / DSR-5009PA							750 GB
Recording Speed		Picture Quality					Audio Recording
IPS	Recording Interval (sec.)	Basic 8 kB	Normal 16 kB VHS (EP)	Enhanced 24 kB VHS (SP)	Fine 32 kB S-VHS	Super Fine 40 kB S-VHS+	
Recording Time (unit: hour)							
100.00	0.01	195	102	71	53	42	
50.00	0.02	390	206	140	108	86	Available
25.00	0.04	777	413	281	213	10	
16.67	0.06	1,167	618	420	318	258	
12.50	0.08	1,037	825	560	425	342	
8.33	0.12	2,337	1,238	840	638	513	
6.25	0.16	3,116	1,647	1,121	851	683	
5.00	0.20	3,893	2,060	1,403	1,062	855	
4.17	0.24	4,668	2,471	1,680	1,272	1,025	
3.57	0.28	5,453	2,885	1,962	1,488	1,197	
3.13	0.32	6,218	3,293	2,238	1,695	1,365	
2.78	0.36	7,001	3,596	2,520	1,910	1,538	
2.50	0.40	7,785	4,122	2,802	2,123	1,710	
2.27	0.44	8,573	4,541	3,087	2,337	1,883	
1.92	0.52	10,137	5,367	3,650	2,765	2,225	
1.67	0.60	11,655	6,170	4,196	3,177	2,558	Not available
1.47	0.68	13,241	7,010	4,767	3,611	2,907	
1.32	0.76	14,745	7,805	5,307	4,020	3,237	
1.19	0.84	16,355	8,658	5,888	4,460	3,590	
1.09	0.92	17,855	9,453	6,428	4,871	3,920	
1.00	1	19,463	10,302	7,008	5,307	4,272	
0.50	2	38,925	20,607	14,013	10,616	8,546	
0.33	3	58,976	31,223	21,233	16,085	12,945	
0.25	4	77,847	41,216	28,025	21,233	17,088	
0.20	5	97,310	51,518	35,033	26,540	21,360	
0.10	10	194,621	103,035	70,062	53,078	42,723	
0.05	20	389,240	206,067	140,127	106,158	85,443	
0.03	30	648,735	343,448	233,546	176,928	142,406	

DSR-3716PA / DSR-3709PA / DSR-3706PA							750 GB
Recording Speed		Picture Quality					Audio Recording
IPS	Recording Interval (sec.)	Basic 15 kB	Normal 22 kB VHS (EP)	Enhanced 30 kB VHS (SP)	Fine 42 kB S-VHS	Super Fine 50 kB S-VHS+	
Recording Time (unit: hour)							
50.00	0.02	233	165	123	90	75	
25.00	0.03	468	333	248	180	153	Available
16.67	0.05	702	498	372	270	230	
12.50	0.07	938	665	498	363	305	
8.33	0.10	937	664	497	361	306	
6.25	0.13	1,878	1,331	998	725	612	
5.00	0.17	2,348	1,662	1,245	905	768	
4.17	0.20	2,816	1,995	1,496	1,088	920	
3.57	0.23	3,285	2,328	1,745	1,268	1,073	
3.13	0.27	3,755	2,636	1,995	1,451	1,227	
2.78	0.30	4,226	2,993	2,246	1,632	1,380	
2.50	0.33	4,695	3,326	2,493	1,812	1,535	
2.27	0.37	5,165	3,657	2,742	1,995	1,688	
1.92	0.43	6,102	4,323	3,243	2,358	1,995	
1.67	0.50	7,043	4,988	3,740	2,720	2,303	
1.47	0.60	7,983	5,652	4,241	3,083	2,607	Not available
1.32	0.70	8,921	6,318	4,737	3,446	2,915	
1.19	0.80	9,860	6,983	5,238	3,807	3,222	
1.09	0.90	10,800	7,650	5,738	4,173	3,530	
1.00	1	11,738	8,315	6,236	4,535	3,837	
0.50	2	23,478	16,631	12,473	9,071	7,676	
0.33	3	35,217	24,945	18,708	13,605	11,513	
0.25	4	46,955	33,260	24,945	18,140	15,350	
0.20	5	58,695	41,576	31,184	22,677	19,188	
0.10	10	117,390	83,153	62,363	45,356	38,378	
0.05	20	234,783	166,305	124,728	90,710	76,755	
0.03	30	352,175	249,458	187,092	136,068	115,133	

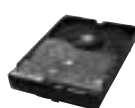
DSR-300P							500 GB
Recording Speed		Picture Quality					Audio Recording
fields/sec.	Recording Interval (sec.)	Basic 15 kB	Normal 22 kB VHS (EP)	Enhanced 30 kB VHS (SP)	Fine 42 kB S-VHS	Super Fine 50 kB S-VHS+	
Recording Time (unit: hour)							
50.00	0.02	198	143	103	72	55	
25.00	0.04	403	285	213	150	112	Available
16.67	0.06	602	428	317	230	175	
12.50	0.08	808	570	428	308	230	
8.33	0.12	1,212	855	642	467	348	
6.25	0.16	1,615	1,140	855	618	467	
5.00	0.20	2,018	1,425	1,068	777	587	
4.17	0.24	2,423	1,718	1,283	935	705	
3.57	0.28	2,827	2,003	1,497	1,093	823	
3.13	0.32	3,230	2,288	1,718	1,243	942	
2.78	0.36	3,633	2,573	1,932	1,402	1,062	
2.50	0.40	4,038	2,858	2,145	1,560	1,180	
2.27	0.44	4,442	3,143	2,360	1,718	1,298	
1.92	0.52	5,248	3,722	2,787	2,027	1,537	
1.67	0.60	6,057	4,292	3,215	2,335	1,773	Not available
1.47	0.68	6,872	4,862	3,650	2,652	2,012	
1.32	0.76	7,680	5,438	4,077	2,962	2,248	
1.19	0.84	8,487	6,008	4,505	3,278	2,487	
1.09	0.92	9,295	6,578	4,932	3,587	2,723	
1.00	1	10,102	7,157	5,368	3,903	2,962	
0.50	2	20,212	14,313	10,735	7,807	5,922	
0.33	3	30,313	21,470	16,103	11,708	8,883	
0.25	4	40,423	28,627	21,470	15,612	11,843	
0.20	5	50,525	35,792	26,838	19,523	14,805	
0.10	10	101,057	71,583	53,683	39,045	29,617	
0.05	20	202,120	143,165	107,373	78,090	59,240	
0.03	30	303,177	214,748	161,065	117,135	88,857	

* The recording time may vary slightly depending on the complexity of the images and the presence of an audio signal.
 * The recording time will change depending on the settings for the storage area, and the availability of an optional HDD. Contact the place of purchase for details on increasing the capacity by adding a HDD.
 Reference: 24H = 1 day, 168H = 1 week, 720H = 1 month, 8760H = 1 year

DSR-M814PA / DSR-M810PA					500 GB / 1 TB
PICTURE QUALITY	SUPER+ (3.9Mbps)	SUPER (2.6Mbps)	HIGH (1.2Mbps)	STANDARD (0.5Mbps)	
CAPACITY					
500GB	233 h	350 h	700 h	1,400 h	
1TB	466 h	700 h	1,400 h	2,800 h	

Optional S-ATA HDD
(sold separately)
for VA-EXH

VA-SH3400
(400GB S-ATA)
VA-SH3500
(500GB S-ATA)



Optional External Unit (sold separately)

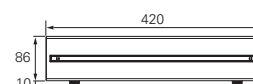
Optional units for the expansion of the DSR series, Depending on the main unit used.

VA-EXH The VA-EXH is an expansion unit that employs four HDD bays and enables further extension of recording time. (for DSR-5716P* / DSR-5709P* / DSR-5016PA / DSR-5009PA) See page 42, 44 * Requires VA-SATAB1.

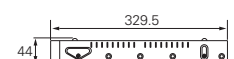
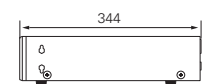
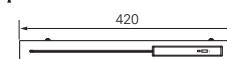
VA-EXD1 B This external DVD / CD-Writer is a perfect match for for DSR-5716P / DSR-5709P / DSR-5016PA / DSR-5009PA. See page 42, 44

VA-EXD1 W This external CD-Writer is a perfect match for DSR-3716PA / DSR-3709PA / DSR-3706PA. See page 46, 47

VA-EXH



VA-EXD1 B, VA-EXD1 W



(Unit: mm)

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

16ch Hybrid Digital Video Recorder

DSR-HB8000**Preliminary****MPEG-4**

The MPEG (Moving Picture Experts Group) 4 standard was designed to reproduce a wide range of moving pictures from those on a low speed communication line to those with high-definition TV picture quality. Also available is SANYO's proprietary format, the MPEG-4+ mode, which requires less resources. It is more advantageous in networks, enabling smooth video reproduction with a special playback operation.

Simultaneous Recording and Playback (720 x 576 pixels)**New digital security system will be composed analog and network cameras into a system**

The DSR-HB8000 is a hybrid model that is capable of connecting and controlling network cameras and conventional analog cameras simultaneously.

Up to 4 network cameras

Network cameras

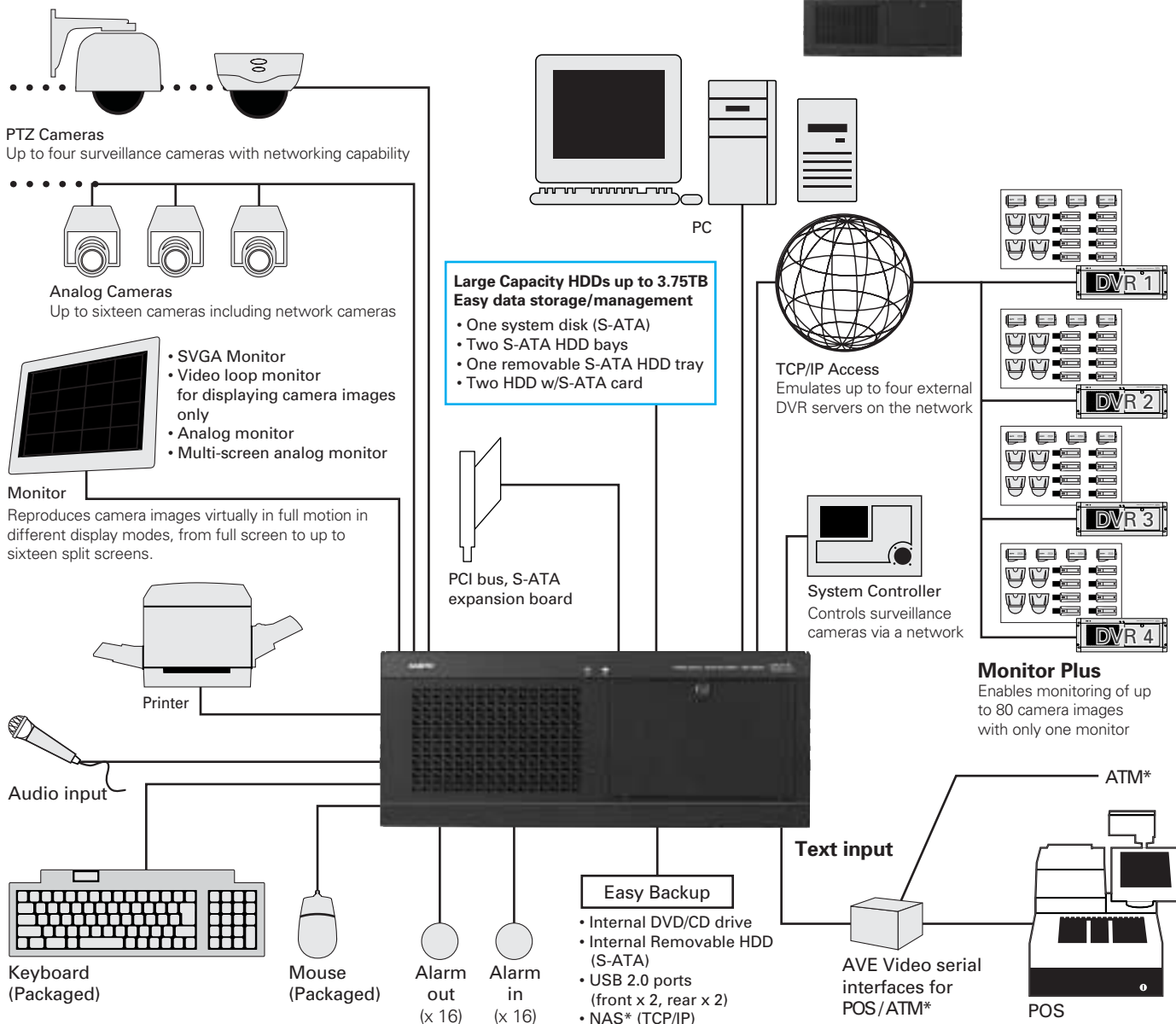
Via Ethernet

Up to 16 analog cameras

Analog cameras

Via video cable

4 units + 12 units
3 units + 13 units
2 units + 14 units
1 unit + 15 units
0 + 16 units

**Conceptual diagram for a network with a DSR-HB8000 at the hub**

*TBD

Camera Telemetry Control

DSR-HB8000 is capable of controlling PTZ dome cameras and zoom cameras through coaxial cables or RS-485. It also allows this control from a network PC or a controller. The unit also supports protocols of other major brands.

Full-motion, Multiple Screen Display of Live Video Images

The monitor can display different video images from 4ch up to 16ch simultaneously, in addition to displaying a single channel in full-screen mode.

Extensive Search Functions

One Channel Search:

Searches for recorded video on a specific channel and plays it back.

Time/Date Search:

Playback recorded video by specifying date and time.

Thumbnail Search:

Displays a list of up to 24 images from the checked video in panorama mode.

Motion Search:

Using motion detection, searches for video containing moving objects.

Time Bar Search:

Displays a data mapping of recorded video on all channels and playback multiple video in multi-screen.

Text Search:

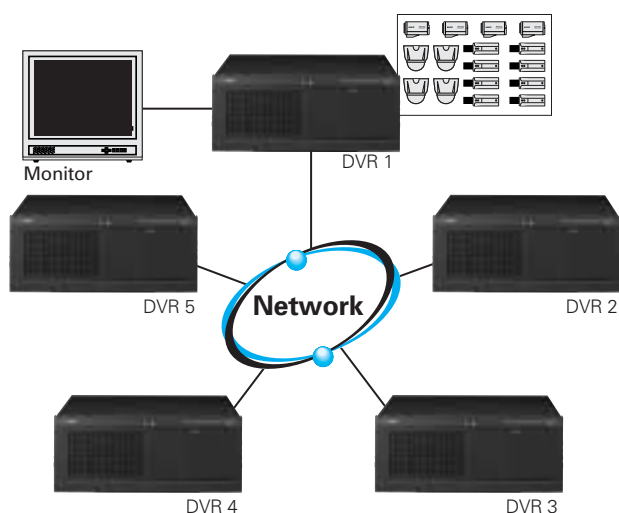
Searches for texts and video using keywords in a POS (Point of Sales System) recording data.

Alarm Log Search:

Searches for video from an event list.

Monitor Plus

By connecting four DSR-HB8000 units via a network, this feature offers a capability to view all 80 camera images on the main DSR-HB8000 unit.



This monitor can view all 80 cameras

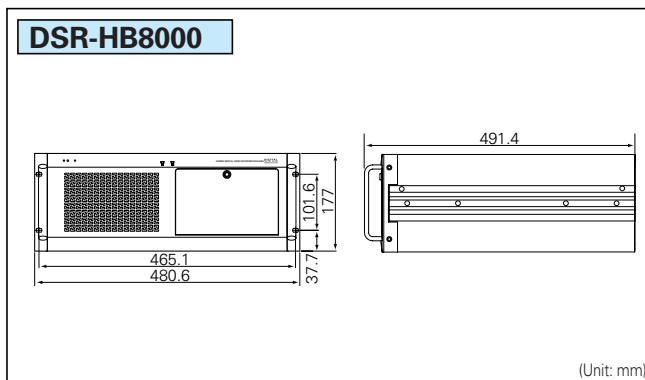
16 cameras on DVR 1 16 cameras on DVR 4
16 cameras on DVR 2 16 cameras on DVR 5
16 cameras on DVR 3

Add Text Information on the Surveillance Video

Recorded images can be looked up using the text data in the electronic journal. The AVE Interface provides access to the journal data containing information on a POS system or ATM terminals. For example, a transaction record on such systems can identify the operator, the time and date, the terminal, or the customer for any deposit, withdrawal, or exchange. This will serve as a valuable tool in enhancing the security system.

Easy and Secure Backup

With the DSR-HB8000, the user can simply click on the Data Back-up icon on the Surveillance screen to store and manage a large amount of information on the network. In addition to the built-in HDD, a CD-R, CD-RW, or DVD on the integrated CD/DVD drive or a memory stick on the USB port can be selected as a backup destination.



(Unit: mm)

MODEL	DSR-HB8000
General Hard disk capacity	One System Disk (S-ATA) + Two S-ATA HDD Bays + One Removable S-ATA HDD Tray + Two HDD w/S-ATA card (option) Max. HDD Capacity 3.75TB
CPU	Intel Pentium® 4 3.00GHz
RAM	512MB, DDR2 PC2-4200
Operating system	Microsoft Windows® XP Embedded
Picture resolution (pixels)	720 x 576, 720 x 288, 360 x 288
Video codec	MPEG-4, MPEG-4+
Audio codec	G.721, 8kHz sampling rate
Picture quality	5 levels (Basic, Normal, Enhanced, Fine, Super Fine)
Recording speed	400IPS/16ch (CIF), 200IPS/8ch (Half D1), 100IPS/4ch (D1)
Still image capture (BMP/JPEG)	720 x 576, 720 x 288, 360 x 288
Number of cameras	16 (Network camera max. 4 units)
Menu language	English / French / Spanish / German / Italian / Other *1
Telemetry Control Protocol	COAX: SANYO (H-SSP) / PELCO-C RS-485: SANYO (SSP) / PELCO-D / VICON / KALATEL / SENSOMATIC *1
Search mode	One Channel Search, Time/Date Search, Thumbnail Search, Motion Search, Time Bar Search, Text Search, Alarm Log Search
Video	Signal format PAL standard (Color) / CCIR standard (B/W) auto select, 625 lines, 400IPS Video input VBS / VS 1.0 V (p-p) 75 Ω, BNC x 16 Video output BNC x 16 (Loop through), VGA x 1*2 Main monitor output VS 1.0 V (p-p) 75 Ω BNC x 1 Monitor 2 output VBS / VS 1.0 V (p-p) 75 Ω BNC x 1
Audio	Audio input 16ch: MicroCross connector x1 (rear) Audio output -8 dBs 600 Ω unbalanced mini jack x 1 (rear)
Display	Speed (Live) Max. 400IPS (16 screen split) Emulation Monitor Plus (Up to total 5 DVRs display) Screen split 1, 4, 7, 8, 9, 10, 13, 16
Backup storage support	Internal DVD / CD drive, Internal Removable HDD (S-ATA), USB 2.0 ports (front x 2, rear x 2), NAS*1 (TCP/IP)
Network Interface	ADSL, LAN / Dynamic IP supported
LAN	RJ-45 x 1, LAN: 1000BASE-TX Compatible protocol: UDP, TCP/IP, HTTP, DHCP, SMTP, NTP, PPP server
Control Signal	RS-485 RJ-11 x 2, (With a termination switch) RS-485(2ND) COAX PTZ port x 1 RS-232C D-sub 9-pin x 1 USB USB 2.0 Ports x 4 (Front x 2, Rear x 2) Sensor alarm input (Push lock) No-volt contacts, (100ms or more) x 16 Alarm output (Push lock) Open collector, Low level active (Max. 25 mA) x 16, Relay output Mouse control input PS / 2 x 1 Keyboard input PS / 2 x 1
Expansion slot	PCI-express x 2, PCI x 3
Electrical	Power source 100 V to 240 V AC, 50 / 60Hz, Free voltage Power current 8A (AC100 V), 4A (AC240 V) Operating conditions Temperature: 5°C to 40°C (41°F to 104°F) Humidity: 30 to 80% RH (non-condensing)
Storage temperature	-5°C to 60°C (23°F to 140°F)
Physical Dimensions (W x H x D)	431 x 177 x 458 mm (17.0" x 7.0" x 18.0")
Net weight (approx.)	21.8 kg (44.1 lbs.) (HDD x 4, DVD-R/W x 1)
Standard accessories	Keyboard, Mouse, S-ATA cable, Audio cable (RCA), AC power cord, Rack mounting kit
Options	S-ATA card (Support add S-ATA HDD x 4), POS/ATM*1 (AVE VSI-PRO)

NOTE: Specifications subject to change without notice

*1 TBD *2 Either the video output or VGA output can be enabled at any one time.

Warnings regarding HDDs

- Do not attempt to install or replace a HDD on your own. You cannot use these HDDs on PCs.
- The unit may be damaged if it is exposed to an impact or vibration, or the power plug is disconnected during operation.
- Sanyo will not be held liable for any data loss due to an HDD error or a failure during recording.
- * "Microsoft" is registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- * All other company and product names are registered trademarks and/or trademarks of their respective owners.

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera - Lens

DVR

SSP System

Monitor

Example System

16ch Digital Video Recorder

DSR-5716P**New****Made in Japan**

9ch Digital Video Recorder

DSR-5709P**New****Made in Japan**

A High-end Recorder Offering 100 IPS in JPEG2000 Enables extended recording in superior picture quality. It's an advanced model with new network features.

An all-in-one Unit with Superior Expandability that Also Serves as a System Hub

The DSR-5716P / DSR-5709P processes a variety of signals — digital, SSP, network — and can play the role of a system hub. It offers clear picture recording and split-screen surveillance and comes with USB terminals. Its video terminals enable multi-screen real-time monitoring at 800 IPS for DSR-5716P and 450 IPS for DSR-5709P. And it comes with a telemetry function that offers control over PTZ / zoom cameras, including those supplied by other manufacturers. It is an all-new unit that is capable of accommodating even the most sophisticated surveillance need.

Extended Recording Time

JPEG2000 improves picture quality without increasing the size of the data file, or maintains current quality with a reduced file size. This means you get more recording time from the same HDD capacity.

Simultaneous Recording and Playback at 100 IPS (720 x 288 pixels)

SANYO's expertise in the field has made it possible to record and playback simultaneously at a maximum speed of 100 IPS.

Exclusive Extension Units

The VA-EXH, an external HDD unit for further extending recording time, and the VA-EXD1 B, a disc writer for backing-up or copying data to portable media, are both available for the DSR-5716P / DSR-5709P.

(Note) The S-ATA board VZU-SATB1 is needed when connected to the external HDD unit, VA-EXH.

ROI (Region of Interest)

ROI is one of the advanced features included in the JPEG2000 compression method. By setting ROI, it is possible to apply better picture quality for particular areas preset on the screen. The ROI area setting is up to the user.



ROI: OFF BASIC mode (12KB)

Use the same amount of data ...

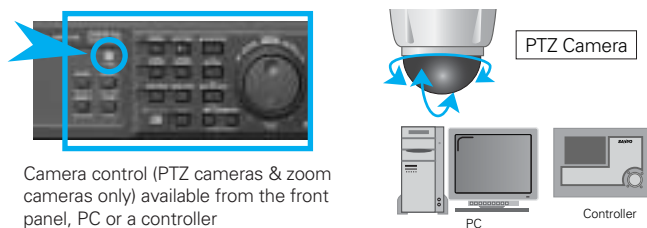


ROI: MAX Static ROI recording (12KB)

for enhancing the picture quality of regions of interest

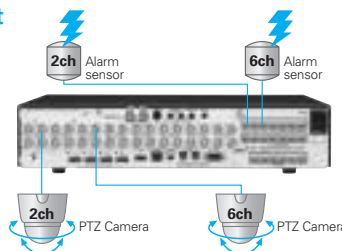
Camera Telemetry Control

The DSR-5716P / DSR-5709P are capable of controlling PTZ dome cameras and zoom cameras through coaxial cables or RS-485. It also allows this control from a network PC or a controller. The unit also supports protocols of other major brands.



Camera with no Alarm Input Controlled by an External Alarm

Through this unit, an external alarm can prompt PTZ cameras such as VCC-9500P / VCC-9600P / VCC-9700P / VCC-9800P to return to preset positions and perform other operations. There are four operations available — PRESET, TOUR, AUTO PAN and SEQUENCE. *This control is activated only when the setting of alarm recording is ON and the setting of alarm trigger is the external alarm.



Built-in VGA (1024 x 768 pixels) Terminal

The VGA terminal allows direct connection to a PC monitor, which can then be used to monitor surveillance video. It also enables remote terminals to replay video with VGA quality, thus improving the thoroughness of monitoring.

Supports up to 2TB HDD

The unit has two HDD bays, each supporting up to 2TB HDD to make the unit the right choice in today's trend for bigger drives. Selecting a drive of the same capacity will allow the use of the mirroring* function for data backup. For the latest available range of optional drives, contact the place of purchase.

* Mirror Recording

DSR-5716P / DSR-5709P each comes with two HDD bays. With two HDDs of the same capacity installed, it is possible to record the same video on two HDDs, thus allowing for a backup.

Alarm Log Search

Recordings made during a particular period are shown in a user-friendly GUI. By designating the hour, minute, month, or day of the week of alarm events, a search is performed on a log file to narrow the search and bring up the desired scene.

Multi Alarm Events Copy

Now it is possible to copy recorded video and audio directly to external media without the use of the archive area. This allows the user to retrieve desired video quickly.

CD-R/RW, DVD+R/+RW

The unit comes with two USB terminals located on both the front and rear panels. Using one of these terminals, it is possible to backup data to CD-R/RW discs (Max. 640MB), DVD+R/+RW (Max. 4.6GB). The use of discs ensures secure storage of necessary video and audio data. *Recommended products only

USB Ports

The DSR-5716P and DSR-5709P come with two USB ports, one each on the front and rear panel. The front USB port is handy for using USB memories, for features such as Downloading and Uploading in the setup menu, newly added firmware update, and downloading images. The rear port can be used to connect VA-EXD1B, which enables the downloading of images to a CD or DVD. *When the front and rear USB ports are used simultaneously, the front port is always given priority.

Independent Alarm Recording Rate for Each Channel

The unit lets the user set different rates of recording for each camera for recordings activated by the motion sensor or an alarm input. Within the preset time frame, the user has freedom to change the recording rate for each camera according to needs.

Choosing Live Picture Resolution at Remote Terminals

When the main unit is set to record video at basic quality, you can still choose enhanced quality for monitoring live video on a remote PC. It is also possible to record super-fine quality pictures on the main unit and monitor the basic quality video on a terminal to reduce network load. In short, the unit allows the user to choose the quality of live video independently, regardless of its recording mode. *This does not apply when the recording is done at the maximum rate of 100FPS.

CCTV system Management Software VA-SW5000

By installing the VA-SW5000 software bundled with the unit, remote surveillance of a large-scale system can be easily accomplished from a local PC. System setup and DVR operation is also possible. In addition, it allows simultaneous access of up to eight users. The four-level security feature effectively prevents hacking and maintains the system integrity. Each user is allowed to sign-on independently and can access a maximum of 256 DVR units. Also included in the features is e-mailing any alarm event to a predefined mail address. The user-friendly GUI, which is customized the way only possible with exclusive software, ensures easy operation of the surveillance system.

System environment

	Master computer	Slave computer
OS	Windows® 2000 Professional (SP4), Windows® XP Professional	
CPU	Pentium® 4 - 3.4GHz or faster [RECOMMENDED: Pentium® 4 - 3.0GHz]	Pentium® 4 - 3.0GHz [RECOMMENDED: Pentium® 4 - 3.4GHz]
RAM	1024MB or more	
VIDEO	XGA (1024 x 768 pixel) 16-bit color, DirectX® 9.0 or above [Recommended graphics cards] ATI RADEON 9000 series or later NVIDIA® GeForce 4 series or later, Quadro 4 series or later Matrox Millennium P series or later (On-board video is not recommended.)	
MONITOR	XGA (1024 x 768 pixel) 16-bit color	
HDD	System setup area: 120MB Data save area: 2GB or above	System setup area: 120MB
LAN PORT	100Mbps x 1 [RECOMMENDED: 1Gbps x 1]	100Mbps x 1
NET Computer side	LAN: 100Mbps [RECOMMENDED: 1Gbps] Internet: 1.5Mbps (Downstream) [RECOMMENDED: 5Mbps]	
DVR side	LAN: 10Mbps [RECOMMENDED: 100Mbps] Internet: 1.5Mbps (Upstream) [RECOMMENDED: 5Mbps]	
OTHERS	CD-ROM Drive (for Software Install) E-mail account x 1 (SMTP / POP)	CD-ROM Drive (for Software Install)

Even if the above operating environment conditions are satisfied, images may not display correctly if synchronizing signal distortion occurs.

Optional accessories (sold separately)

External HDD unit VA-EXH

VA-EXH up to four HDDs enables a drastic increase in recording capacity.



S-ATA Board VZU-SATB1 for VA-EXH

The VZU-SATB1 enables the connection to an external HDD unit.

Disc writer VA-EXD1 B

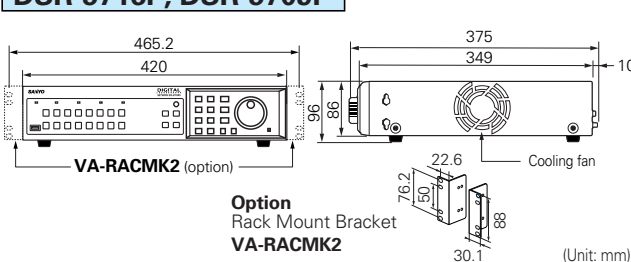
Backup important data on DVD+R/RW discs or CD-R/RW discs with the USB connection.



SCSI Board VZU-SCB1

The VZU-SCB1 enables the connection to an external RAID system. For further details on compatible devices, please contact the place of purchase.

DSR-5716P, DSR-5709P



MODEL	DSR-5716P	DSR-5709P
General	Hard disk capacity Max HDD Capacity (Technically) per bay 2TB	
Picture resolution	720 x 288 (pixels)	
Compression	JPEG2000	
Picture quality	5 levels (Basic, Normal, Enhanced, Fine, Super Fine)	
Recording speed	28 levels. (100 to 0.033 FPS)	
Recording area	Recording area / Archive area	
Number of cameras	16	9
Menu language	English / French / German / Spanish	
Date / Clock setup	Day / Month / Year (last two digits) / Hour / Minute / Second	
Magnification	2x digital zoom using the [ZOOM] button	
Search Mode	Alarm Log Search, Alarm Search, Alarm Thumbnail Search, Time/Date Search, Archive Area Search, Motion detection Search, Bookmark Search	
Memory backup	Approximately 30 days (for 48 hours of electrification)	
Video	Signal format PAL standard (Color) / CCIR standard (B/W) auto select, 625 lines, 50 IPS	
Video input	VBS / VS 1.0 V (p-p) 75 Ω BNC x 16	VBS / VS 1.0 V (p-p) 75 Ω BNC x 9
Video output	BNC x 16	
Main monitor output	VS 1.0 V (p-p) 75 Ω BNC x 1, VGA x 1	
Monitor 2 output	VBS / VS 1.0 V (p-p) 75 Ω BNC x 1	
VGA output	Dsub-15 pin	
Audio	Audio input -8 dBs 27 kΩ unbalanced RCA x 1	
Audio output	-8 dBs 600 Ω unbalanced RCA x 1	
Control signal	LAN 10BASE-T / 100BASE-TX, RJ-45 x 1 Compatible protocol: UDP, TCP/IP, HTTP server, NTP, SMTP, DHCP	
RS-485 / 422	RJ-11 x 2, (With a termination switch)	
USB	USB2.0 Series terminal x 2 (Front x 1, Rear x 1)	
Alarm input	No-volt contacts (100ms or more) x 16	No-volt contacts (100ms or more) x 9
Alarm output	Relay (DC24 V Max. 1A / AC125 V Max. 0.3 A)	
Sensor alarm output	Open collector, Low level active (Max. 25 mA) x 16	Open collector, Low level active (Max. 25 mA) x 9
Remote control input	Two-wire voltage control x 2	
Non rec out	Normal 5 V DC, Low level active x1	
Clock set input	No-volt contacts (100ms or more) x 1	
Clock set output	Active low, Open collector Max. 25mA x 1	
Alarm reset	No-volt contacts (100ms or more) x 1	
Warning output	Normal DC 5 V Low level active x 1	
Disk full output	Normal DC 5 V Low level active x 1	
Output 1 / Output 2	Normal DC 5 V Low level active x 1	
External timer input	No-volt contacts (100 ms or more) x1	
Protocols	SANYO, Pelco, GE, AD, BBV	
Expandable slot	Option SCSI board (Ultra 160 SCSI), Option S-ATA board	
Electrical	Power source 120 V to 240 V AC, 50 / 60 Hz	
Power consumption	720mA	
Operating conditions	Temperature: 5°C to 40°C [41°F to 104°F], Humidity: 80% or less	
Physical	Dimensions 420(W) x 96(H) x 365(D) mm [16.5(W) x 3.8(D) x 14.4(D) in.]	
Weight (Approx.)	6.1 kg [13.5 lbs.] (without HDD), 6.6 kg [14.6 lbs.] (with one HDD), 7.2 kg [15.9 lbs.] (with two HDDs)	

Warnings regarding HDDs

- Do not attempt to install or replace a HDD on your own. You cannot use these HDDs on PCs.
- The unit may be damaged if it is exposed to an impact or vibration, or the power plug is disconnected during operation.
- Sanyo will not be held liable for any data loss due to an HDD error or a failure during recording.
- * "Microsoft" is registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- * All other company and product names are registered trademarks and/or trademarks of their respective owners.

NOTE: Specifications subject to change without notice

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera Lens

DVR

SSP System

Monitor

Example System

16ch Digital Video Recorder DSR-5016PA



Made in Japan



9ch Digital Video Recorder DSR-5009PA



Made in Japan



High performance DVR adopting JPEG2000 format.
Features high-speed recording at 100 IPS and superior networking capability, plus expandability for future needs.

JPEG2000

Simultaneous Recording and Playback at 100 IPS (720 x 288 pixels)

Full-motion, Multiple Screen Display of Live Video Images

Multiple live video images can be viewed simultaneously in 16, 9, or 4 split-screen display at the speed of 50 IPS/channel. Full screen display is also available. Select the desired display mode without worrying about the update speed. It is also possible to see multi-screen display on the second monitor (MON2).

Audio Recording Available

Audio recording is available for recording speeds from 100 IPS to 1 IPS. (A 2ch audio input is provided.)

ROI (Region of Interest)

ROI is one of the sophisticated features included in the JPEG2000 compression method. By setting ROI, It is also possible to save storage space by assigning lower picture quality for insignificant areas. The user can set up to three different ROI areas.

In addition, by applying ROI, the user can select a particular area to be recorded with better picture quality when any change in brightness is detected.

BASIC mode (8KB)



ROI: OFF



ROI: MAX

Use the same amount of data ...

for enhancing the picture quality of regions of interest

Supports up to 2TB HDD per one bay

The unit has two HDD bays.

*Mirror Recording

DSR-5016PA / DSR-5009PA each comes with two HDD bays. With two HDD's of the same capacity installed, it is possible to record the same video on two HDDs, thus allowing for a backup.

Longer recording time with an expansion unit

The DSR-5016PA / DSR-5009PA can be connected to an external HDD unit VA-EXH to further increase storage capacity. The VA-EXH has four HDD bays, each supporting up to 2TB. Also, an optional SCSI board VZU-SCB1 enables connection to a RAID unit.*

*For further details on compatible devices, please contact the place of purchase.

Five Different Picture Qualities and 28 Recording Speeds Enable Flexible Settings

The picture quality is selectable from BASIC, NORMAL, ENHANCED, FINE and SUPER FINE.

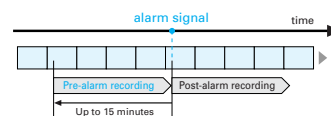
Alarm Log Search

Recordings made during a particular period are shown in a user-friendly GUI. By designating the hour, minute, month, or day of the week of alarm events, a search is performed on a log file to narrow the search and bring up the desired scene.

Three Recording Modes for Flawless Recording

DSR-5016PA / DSR-5009PA has three recording modes; Alarm, Timer, and Program. The three modes can operate individually or in any combination.

Alarm Recording
Pre-alarm Recording
Timer Recording
Programmed Recording



Extensive Display Options

For both live picture monitoring (during multiplex recording) and playback of pictures, the user can select from 16-screen, 13-screen, 9-screen, 6-screen, 4-screen display, and full-screen (1-screen) display.

- Plus display
- Screen position assignment
- Monitor masking

Camera Telemetry Control

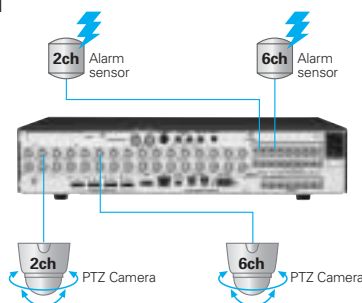
The DSR-5016PA / DSR-5009PA are capable of controlling PTZ dome cameras and zoom cameras through coaxial cables or RS-485. This control is also possible from a network PC or a controller. The unit also supports protocols of other major brands.

* SSP (SANYO Security Serial Protocol) is a communication protocol for security devices developed by SANYO.

A Camera with no Alarm Input Controlled by an External Alarm

Through this unit, an external alarm can prompt PTZ cameras such as VCC-9800P series to return to preset positions and perform other operations. There are five operations available — PRESET, TOUR, AUTO PAN, SEQUENCE, and AUTO FOCUS.

*This control is activated only when the setting of alarm recording is "ON" and the setting of alarm trigger is the external alarm.



Multiple Backup Methods Depending on Data Size

CD-R/RW, DVD+R/+RW

The unit comes with two USB terminals located on both the front and rear panels. Using one of these terminals, it is possible to backup data to CD-R/RW discs (Max. 640MB), DVD+R/+RW (Max. 4.6GB). The use of discs ensures secure storage of necessary video and audio data. (Two USB terminals cannot be used simultaneously. The front USB terminal has the higher priority.)

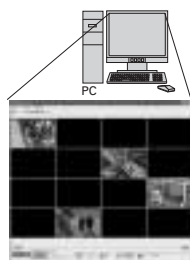
One Touch Multi-Channel Copy

Multiple channels can be copied to various media with a single operation. Use the camera select buttons on the front panel to select desired cameras and start recording. Pressing the MULTI button will select all cameras simultaneously.



Multi-screen Display for Network PCs

The DVR Viewer2 software allows the user to select from full-screen, Quad, Multi-9, and Multi-16 displays on any PC on the network. The DVR Viewer2 software is automatically downloaded by copying an image. It is also available for download on our website.



CompactFlash or Microdrive

DSR-5016PA / DSR-5009PA comes with a CF Type II expansion slot. It allows the user to export video data to a CompactFlash or Microdrive, and provides an easy way to store data or transfer it to a PC. Downloading and uploading of setup menus by use of a CF card offer an easy option for setting up additional DSR-5016PA / DSR-5009PA recorders.

*Recommended products only

Network Features

The DVR is operable from a PC.

CCTV system Management Software

VA-SW5000

By installing the VA-SW5000 software bundled with the unit, remote surveillance of a large-scale system can be easily accomplished from a local PC. System setup and DVR operation is also possible. In addition, it allows simultaneous access of up to eight users. The four-level security feature effectively prevents hacking and maintains the system integrity. Each user is allowed to sign-on independently and can access a maximum of 256 DVR units. Also included in the features is e-mailing any alarm event to a predefined mail address. The user-friendly GUI, which is customized the way only possible with exclusive software, ensures easy operation of the surveillance system.



System environment

	Master computer	Slave computer
OS	Windows® 2000 Professional (SP4), Windows® XP Professional	
CPU	Pentium® 4 - 3.4GHz or faster [RECOMMENDED: Pentium® 4 - 3.4GHz]	Pentium® 4 - 3.0GHz [RECOMMENDED: Pentium® 4 - 3.4GHz]
RAM	1024MB or more	
VIDEO	XGA (1024 x 768 pixel) 16-bit color, Direct® 9.0 or above [Recommended graphics cards] ATI RADEON 9000 series or later NVIDIA® GeForce 4 series or later, Quadro 4 series or later Matrox Millennium P series or later (On-board video is not recommended.)	
MONITOR	XGA (1024 x 768 pixel) 16-bit color	
HDD	System setup area: 120MB Data save area: 2GB or above	System setup area: 120MB
LAN PORT	100Mbps x 1 [RECOMMENDED: 1Gbps x 1]	100Mbps x 1
NET Computer side	LAN: 100Mbps [RECOMMENDED: 1Gbps] Internet: 1.5Mbps (Downstream) [RECOMMENDED: 5Mbps]	
DVR side	LAN: 10Mbps [RECOMMENDED: 100Mbps] Internet: 1.5Mbps (Upstream) [RECOMMENDED: 5Mbps]	
OTHERS	CD-ROM Drive (for Software Install) E-mail account x 1 (SMTP / POP)	CD-ROM Drive (for Software Install)

Even if the above operating environment conditions are satisfied, images may not display correctly if synchronizing signal distortion occurs.

Optional accessories (sold separately)

External HDD unit VA-EXH

VA-EXH up to four HDDs enables a drastic increase in recording capacity.



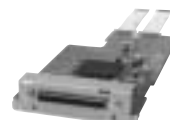
Disc writer VA-EXD1 B

Backup important data on DVD+R/RW discs or CD-R/RW discs with the USB connection.

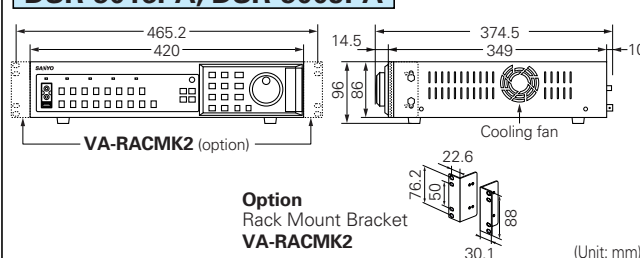


SCSI Board VZU-SCB1

The VZU-SCB1 enables the connection to an external RAID system. For further details on compatible devices, please contact the place of purchase.



DSR-5016PA, DSR-5009PA



MODEL	DSR-5016PA	DSR-5009PA
General	Max HDD Capacity (Technically) per bay 2TB	
Picture resolution	720 x 288 (pixels)	
Compression	JPEG2000	
Picture quality	5 levels (Basic, Normal, Enhanced, Fine, Super Fine)	
Recording speed	28 levels.	
Recording area	Recording Area / Archive Area	
Number of cameras	16	9
Menu language	English / French / German / Spanish	
Clock setup	Day / Month / Year / Hour / Minute / Second	
Search Mode	Time/Date Search, Alarm Search, Alarm Thumbnail Search, Archive Area Search, Motion detection Search, Alarm log Search	
Video	PAL standard (Color) / CCIR standard (B/W) auto select, 625 lines, 50 IPS	
Video input	VBS / VS 1.0 V (p-p) 75 Ω BNC x 16	VBS / VS 1.0 V (p-p) 75 Ω BNC x 9
Video output	BNC x 16	BNC x 9
Main monitor output	VS 1.0 V (p-p) 75 Ω BNC x 1	
Monitor 2 output	VBS / VS 1.0 V (p-p) 75 Ω BNC x 1	
Audio	-8 dBs 27 kΩ unbalanced RCA x 2	
Audio output	-8 dBs 600 Ω unbalanced RCA x 1	
Microphone input	-60 dBs 10 kΩ unbalanced 3.5 mm mini jack x 1	
Front AV	1.0 V (p-p) 75 Ω unbalanced RCA x 1	
Audio output	-8 dBs 600 Ω unbalanced RCA x 1	
Interface	CompactFlash slot CF type 2	
Control signal	10BASE-T / 100BASE-TX, RJ-45 x 1 Compatible protocol: UDP, TCP/IP, HTTP, DHCP, SMTP, NTP, PPP server	
RS-485	RJ-11 x 2, (With a termination switch)	
RS-232C	D-SUB9 pin	
USB	USB2.0 Series terminal x 2 (Front x 1, Rear x 1)	
Alarm input	No-volt contacts (100ms or more) x 16	No-volt contacts (100ms or more) x 9
Sensor alarm output	Open collector, Low level active (Max. 25 mA) x 16	Open collector, Low level active (Max. 25 mA) x 9
Remote control input	Two-wire voltage control x 2	
Clock set input	No-volt contacts (100ms or more) x 1	
Clock set output	Active low, Open collector Max. 25 mA x 1	
Alarm output	Active low, Open collector Max. 500 mA x 1	
Alarm reset	No-volt contacts (100ms or more) x 1	
Warning output	Normal DC 5 V Low level active x 1	
Disk full output	Normal DC 5 V Low level active x 1	
Archive full output	Normal DC 5 V Low level active x 1	
External timer input	No-volt contacts (1 second or more) x 1	
NON Rec output	Normal DC 5 V Low level active x 1	
Camera protocols	SANYO, Pelco, GE, AD, BBV	
Electrical	Power source 120 V to 240V AC, 50 / 60 Hz	
Power consumption	880mA	
Operating conditions	Temperature: 5°C to 40°C [41°F to 104°F], Humidity: 80% or less	
Physical	Dimensions 420(W) x 96(H) x 365(D) mm [16.54(W) x 3.78(H) x 14.37(D) in.]	
Weight	7.0kg [15.4 lbs.] (with one HDD unit)	

NOTE: Specifications subject to change without notice

Warnings regarding HDDs

- Do not attempt to install or replace a HDD on your own. You cannot use these HDDs on PCs.
- The unit may be damaged if it is exposed to an impact or vibration, or the power plug is disconnected during operation.
- Sanyo will not be held liable for any data loss due to an HDD error or a failure during recording.
- * "Microsoft" is registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- * All other company and product names are registered trademarks and/or trademarks of their respective owners.

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera - Lens

DVR

SSP System

Monitor

Example System

16ch Digital Video Recorder DSR-3716PA



Made in Japan



9ch Digital Video Recorder DSR-3709PA



Made in Japan



DSR-3716PA / DSR-3709PA function as a system hub that connects different devices such as cameras and monitors. They offer added benefits of 520 TVL high picture quality, real time (50IPS/screen) multiple screen monitoring, and USB terminals to output data to a CD-R/RW disc.

Simultaneous Recording and Playback at 50 IPS

The simultaneous recording and playback function makes it possible for the user to review recorded images without interrupting the recording in progress.

Full-motion, Multiple Screen Display of Live Video Images

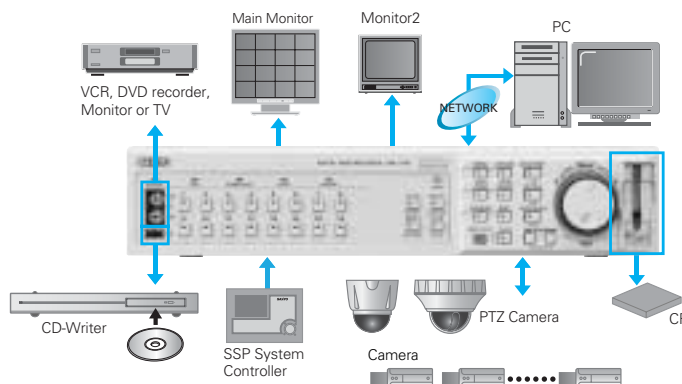
Multiple live video images can be viewed simultaneously in 16, 9, or 4 split-screen display at the speed of 50 IPS/channel. Full screen display is also available. Select the desired display mode without worrying about the update speed.

50 IPS	50 IPS	50 IPS	50 IPS
50 IPS	50 IPS	50 IPS	50 IPS
50 IPS	50 IPS	50 IPS	50 IPS
50 IPS	50 IPS	50 IPS	50 IPS

50IPS	50IPS
50IPS	50IPS

50IPS

The maximum number of cameras for DSR-3709PA is nine respectively.



Pre-alarm Recording/Alarm Recording/Timer Recording

The timer recording mode allows the user to set eight different settings. Different settings for each day of the week and multiple settings for the same day are possible. It is also possible to specify the start / stop time or use a different recording speed.

Programmed Recording

For each of four available programs (P1 to P4), the user can specify particular cameras for recording. In addition, different recording speeds can be set for each program. These programs can also be used when making a timer recording or a pre-alarm recording.

Extensive Display Options

For both live picture monitoring (during multiplex recording) and replay of pictures, the user can select from 16-screen, 13-screen, 9-screen, 6-screen, 4-screen display, and full-screen (1-screen) display.

- Plus display
- Screen position assignment
- Monitor masking

Plus display

	3	4
Plus display	7	8
9	10	11 12
13	14	15 16

Plus display

	3
Plus display	6
7	8 9

The maximum number of cameras for DSR-3709PA is nine respectively.

Audio Recording Available

Audio recording is available for recording speeds from 50 IPS to 1 IPS. (Audio input must be a single channel.)

Supports up to 1TB HDD per one bay

The unit has two HDD bays.

*Mirror Recording

DSR-3716PA / DSR-3709PA each comes with two HDD bays. With two HDD's of the same capacity installed, it is possible to record the same video on two HDDs, thus allowing for a backup.

Five Different Picture Qualities and 27 Recording Speeds Enable Flexible Settings

The picture quality is selectable from BASIC, NORMAL, ENHANCED, FINE and SUPER FINE.

Three Recording Modes for Flawless Recording

DSR-3716PA / DSR-3709PA has three recording modes; Alarm, Timer, and Program. The three modes can operate individually or in any combination.

Camera Telemetry Control

The buttons on the DSR-3716PA / DSR-3709PA front panel allow the user to control PTZ / zoom cameras. The unit transmits SSP* signals by overlaying them on to the video signal through a coaxial cable. This makes it possible to control cameras that support coaxial SSP transmission, without any additional device other than a video cable, not only from the front panel, but also from a SANYO controller or via a network. In addition, BBV and PELCO cameras can also be controlled if they support coaxial signal transmission.

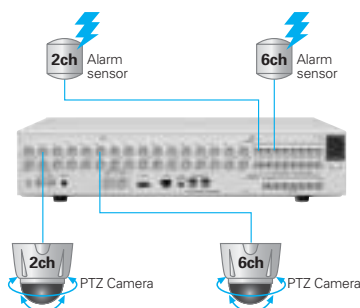
* SSP (SANYO Security Serial Protocol) is a communication protocol for security devices developed by SANYO.



↑ Camera control (PTZ & zoom only) available from the front panel

A Camera with no Alarm Input Controlled by an External Alarm

Through this unit, an external alarm can prompt PTZ cameras such as VCC-9800P series to return to preset positions and perform other operations. There are five operations available — PRESET, TOUR, AUTO PAN, SEQUENCE, and AUTO FOCUS.



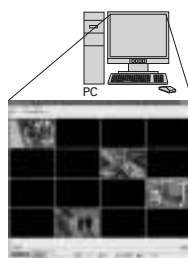
*This control is activated only when the setting of alarm recording is on and the setting of alarm trigger is the external alarm.

Multiple Backup Methods Depending on Data Size CD-R/RW

Through USB terminals located both on the front and rear panels, it is possible to backup data in the HDD archiving area to CD-R/RW discs. The use of discs assures secure storage of necessary video and audio data. (Two USB terminals cannot be used simultaneously. The front USB terminal has the higher priority.)

One Touch Multi-Channel Copy

Multiple channels can be copied to various media with a single operation. Use the camera select buttons on the front panel to select desired cameras and start recording. Pressing the MULTI button will select all cameras simultaneously.



Multi-screen Display for Network PCs

The DVR Viewer2 software allows the user to select from full-screen, Quad, Multi-9, and Multi-16 displays on any PC on the network. The DVR Viewer2 software is automatically downloaded by copying an image. It is also available for download on our website.

CompactFlash or Microdrive

DSR-3716PA / DSR-3709PA come with a CF Type II expansion slot. It allows the user to export video data to a CompactFlash or Microdrive, and provides an easy way to store data or transfer it to a PC. Downloading and uploading of setup menus by use of a CF card offers an easy option for setting up additional DSR-3716PA / DSR-3709PA recorders.

Print Directly from a CF Card or a Microdrive

As for the recommended products, visit our website www.sanyosecurity.com or contact the place of purchase.

AV Output Terminal on the Front Panel

These terminal can be used for supplying signals to a consumer VCR or DVD recorder, thus enabling the use of analog video tapes and DVD discs as recording media. When a TV monitor is connected, the same video signal as the main monitor can be supplied to it, including the menu screen.

Network Features

The DVR is operable from a PC.

CCTV system Management Software VA-SW5000

See page 44 for details.



- Duplex Recording with 1-Image Switching
- Two-level password security lock (admin / user)
- Video loss alarm
- 30-day memory backup
- Resume function
- Disk full alarm
- On-screen mode setting, menu languages built in: English / French / German / Spanish
- Built-in time date generator
- Auto delete
- Alarm counter
- Jog Shuttle
- Forward / reverse field advance
- Automatic summer time adjustment
- Lifetime counter
- Through output of video
- Position adjustable camera titles (10-character)
- One push adjustable clock
- Push-lock terminals for easy installation

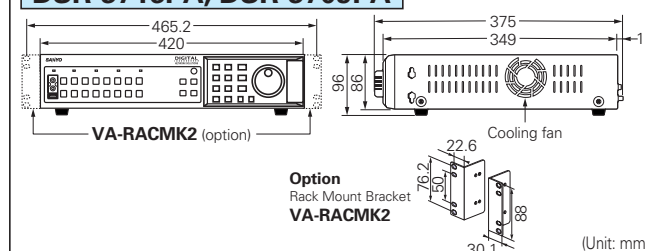
Optional accessories (sold separately)

Disc Writer VA-EXD1 W

Backup important data on CD+R/RW discs with the USB connection.



DSR-3716PA, DSR-3709PA



MODEL	DSR-3716PA	DSR-3709PA
General	Hard disk capacity Max HDD Capacity (Technically) per One bay 1TB	
	Picture resolution 720 x 288 (pixels)	
	Compression M-JPEG	
	Picture quality 5 levels (Basic, Normal, Enhanced, Fine, Super Fine)	
	Recording speed 27 levels.	
	Recording area Normal Recording Area / Alarm Recording Area / Archive Area	
	Number of cameras 16	9
	Menu language English / French / German / Spanish	
	Clock setup Day / Month / Year / Hour / Minute / Second	
Search Mode	Time/Date Search, Alarm Search, Alarm Thumbnail Search, Archive Area Search, Motion detection Search	
Video	Signal format PAL standard (Color) / CCIR standard (B/W) auto select, 625 lines, 50 IPS	
	Video input VBS / VS 1.0 V (p-p) 75 Ω BNC x 16	VBS / VS 1.0 V (p-p) 75 Ω BNC x 9
	Video output BNC x 16	BNC x 9
	Main monitor output VS 1.0 V (p-p) 75 Ω BNC x 1	
	Monitor 2 output VBS / VS 1.0 V (p-p) 75 Ω BNC x 1	
Audio	Audio input -8 dBs 27 kΩ unbalanced RCA x 1	
	Audio output -8 dBs 600 Ω unbalanced RCA x 1	
	Microphone input -60 dBs 10 kΩ unbalanced 3.5 mm mini jack x 1	
Front AV	Video output 1.0 V (p-p) 75 Ω unbalanced RCA x 1	
	Audio output -8 dBs 600 Ω unbalanced RCA x 1	
Interface	CompactFlash slot CF type II	
Control signal	LAN 10BASE-T / 100BASE-TX, RJ-45 x 1 Compatible protocol: UDP, TCP/IP, HTTP server	
	RS-485 RJ-11 x 2, (With a termination switch)	
	USB USB1.1 Series terminal x 2 (Front x 1, Rear x 1)	
	Alarm input No-volt contacts (100ms or more) x 16	No-volt contacts (100ms or more) x 9
	Sensor alarm output Open collector, Low level active (Max. 25 mA) x 16	Open collector, Low level active (Max. 25 mA) x 9
	Remote control input Two-wire voltage control x 2	
	Clock set input No-volt contacts (100ms or more) x 1	
	Clock set output Normal OPEN Low level active x 1	
	Alarm output Active low, Open collector Max. 500 mA x 1	
	Alarm reset No-volt contacts (100ms or more) x 1	
	Warning output Normal DC 5 V Low level active x 1	
	Disk full output Normal DC 5 V Low level active x 1	
	Alarm full output Normal DC 5 V Low level active x 1	
	Series input Normal DC 5 V Low level active x 1	
	Series output Normal OPEN Low level active x 1	
	External timer input No-volt contacts (1 second or more) x 1	
	NON Rec output Normal DC 5 V Low level active x 1	
Electrical	Power source 120 V to 240 V AC, 50 / 60 Hz	
	Power consumption 800 mA	
	Operating conditions Temperature: 5°C to 40°C [41°F to 104°F], Humidity: 80% or less	
Physical	Dimensions 420(W) x 96(H) x 365(D) mm [16.54(W) x 3.78(H) x 14.37(D) in.]	
	Weight 6.3 kg [13.9 lbs.] (with one HDD unit)	

NOTE: Specifications subject to change without notice
 Warnings regarding HDDs
 • Do not attempt to install or replace a HDD on your own. You cannot use these HDDs on PCs.
 • The unit may be damaged if it is exposed to an impact or vibration, or the power plug is disconnected during operation.
 • Sanyo will not be held liable for any data loss due to an HDD error or a failure during recording.

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera Lens

DVR

SSP System

Monitor

Example System

6ch Digital Video Recorder DSR-3706PA

(Unpackaged)

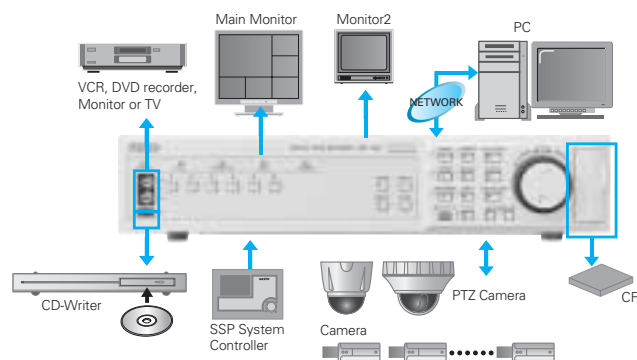


Made in
Japan



An All New 6-ch Model Now Available in
SANYO's Popular DVR Series
The Best Choice for Smaller Applications

High picture quality, long recording time,
max. capacity of 1 TB, and networking capability.



Built-in 6-channel Multiplexer

Up to six cameras can be connected.

Supports up to 1TB HDD per one bay

The unit has two HDD bays.

*Mirror Recording

DSR-3706PA each comes with two HDD bays. With two HDD's of the same capacity installed, it is possible to record the same video on two HDDs, thus allowing for a backup.

Simultaneous Recording and Playback at 50 IPS (720 x 288 pixels)

SANYO's exclusive digital technology allows recording and playback at the same time at 50 IPS (maximum). Smooth images can be reproduced and every incident in the monitored areas is successfully recorded.

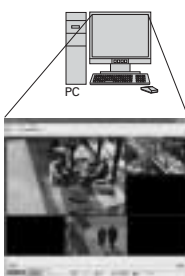
One Touch Multi-Channel Copy

Multiple channels can be copied to various media with a single operation. Use the camera select buttons on the front panel to select desired cameras and start recording. Pressing the MULTI button will select all cameras simultaneously.



Multi-screen Display for Network PCs

The DVR Viewer2 software allows the user to select from full-screen, Quad, Multi-9, and Multi-16 displays on any PC on the network. The DVR Viewer2 software is automatically downloaded by copying an image. It is also available for download on our website.



AV Output Terminal on the Front Panel

Network Features

Can be operated on the PC by installing a CCTV system Management Software VA-SW5000.

- Duplex Recording with 1-Image Switching
- Video loss alarm
- Two-level password security lock (admin / user)
- 30-day memory backup
- Resume function
- Disk full alarm
- On-screen mode setting, menu languages built in: English / French / German / Spanish
- Built-in time date generator
- Plus display
- Timer recording
- Alarm counter
- Auto delete
- Automatic summer time adjustment
- Lifetime counter
- Buzzer
- Position adjustable camera titles (10-character)
- One push adjustable clock
- Print Directly from a CF Card or a Microdrive

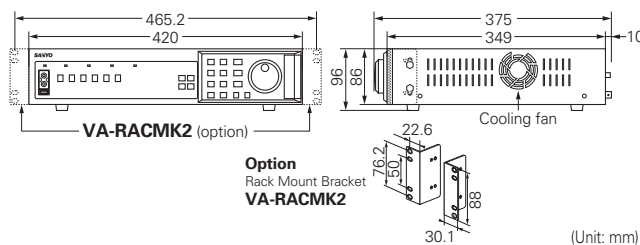
Optional accessories (sold separately)

Disc Writer VA-EXD1 W

Backup important data on CD+R/RW discs with the USB connection.



DSR-3706PA



MODEL	DSR-3706PA
General	
Hard disk capacity	Max HDD Capacity (Technically) per One bay 1TB
Picture resolution	720 x 288 (pixels)
Compression	M-JPEG
Picture quality	5 levels (Basic, Normal, Enhanced, Fine, Super Fine)
Recording speed	27 levels.
Recording area	Normal Recording Area / Alarm Recording Area / Archive Area
Number of cameras	6
Menu language	English / French / German / Spanish
Clock setup	Day / Month / Year / Hour / Minute / Second
Search Mode	Time/Date Search, Alarm Search, Alarm Thumbnail Search, Archive Area Search, Motion detection Search
Video	
Signal format	PAL standard (Color) / CCIR standard (B/W) auto select, 625 lines, 50 IPS
Video input	VBS / VS 1.0 V (p-p) 75 Ω BNC x 6
Video output	BNC x 6
Main monitor output	VS 1.0 V (p-p) 75 Ω BNC x 1
Monitor 2 output	VBS / VS 1.0 V (p-p) 75 Ω BNC x 1
Audio	
Audio input	-8 dBs 27 kΩ unbalanced RCA x 1
Audio output	-8 dBs 600 Ω unbalanced RCA x 1
Microphone input	-60 dBs 10 kΩ unbalanced 3.5 mm mini jack x 1
Front AV	
Video output	1.0 V (p-p) 75 Ω unbalanced RCA x 1
Audio output	-8 dBs 600 Ω unbalanced RCA x 1
Interface	
CompactFlash slot	CF type II
Control signal	
LAN	10BASE-T / 100BASE-TX, RJ-45 x 1 Compatible protocol: UDP, TCP/IP, HTTP server
RS-485	RJ-11 x 2, (With a termination switch)
USB	USB1.1 Series terminal x 2 (Front x 1, Rear x 1)
Alarm input	No-volt contacts (100ms or more) x 6
Sensor alarm output	Open collector, Low level active (Max. 25 mA) x 6
Remote control input	Two-wire voltage control x 2
Clock set input	No-volt contacts (100ms or more) x 1
Clock set output	Normal OPEN Low level active x 1
Alarm output	Active low, Open collector Max. 500 mA x 1
Alarm reset	No-volt contacts (100ms or more) x 1
Warning output	Normal DC 5 V Low level active x 1
Disk full output	Normal DC 5 V Low level active x 1
Alarm full output	Normal DC 5 V Low level active x 1
Series input	Normal DC 5 V Low level active x 1
Series output	Normal OPEN Low level active x 1
External timer input	No-volt contacts (1 second or more) x 1
NON Rec output	Normal DC 5 V Low level active x 1
Electrical	
Power source	120 V to 240 V AC, 50 / 60 Hz
Power consumption	800 mA
Operating conditions	Temperature: 5°C to 40°C [41°F to 104°F], Humidity: 80% or less
Physical	
Dimensions	420(W) x 96(H) x 365(D) mm [16.54(W) x 3.78(H) x 14.37(D) in]
Weight	6.3 kg [13.9 lbs.] (with one HDD unit)

NOTE: Specifications subject to change without notice

Warnings regarding HDDs

- Do not attempt to install or replace a HDD on your own. You cannot use these HDDs on PCs.
- The unit may be damaged if it is exposed to an impact or vibration, or the power plug is disconnected during operation.
- Sanyo will not be held liable for any data loss due to an HDD error or a failure during recording.

1ch Digital Video Recorder

DSR-300P



The simple, easy-to-use design of this digital recorder incorporates advanced features into its compact half-rack design that make it ideal for tight spaces.

Superior horizontal resolution of 520 TV lines with simultaneous recording and playback at 50 IPS (720 x 288, 720 x 576 pixels)

DSR-300P uses the Motion JPEG format for high-quality image recording and playback.

Removable HDD*1

Removable front tray makes it easy to remove and store HDDs for convenient storage. HDDs with a capacity of 80, 160, and 300 GB or 500 GB are available. For added security, the case design includes a lock, meaning that HDD removal requires the use of a special key. The Hard Disk Tray*2 (VA-DT300) is available for ease of installation and storage. For further details about HDDs, contact the place of purchase.

*1 HDDs are sold separately

*2 One Hard Disk Tray VA-DT300 is included.



Compact Size of 210 mm Width

The DSR-300P incorporates advanced digital functions into a compact design that allows it to be used in locations with limited space.

Multiplexer Connectivity

The DSR-300P can be easily connected to multiplexer, making it easy to integrate into an existing VCR-based system. In addition, the optional VZU-COM300 communication board can be installed to allow the separately sold VSP-9000 System Controller to control a multiplexer.

Print Directly from a CF Card or a Microdrive

By using SANYO digital photo printer DVP-P1, it is possible to print images directly from a CF card or a Microdrive. SANYO does not assume responsibility when other printers are used.



CompactFlash (commercial product)
*Up to 2GB supported.



Microdrive (commercial product)

RS-232C / RS-485 / Network Connections Supported with an Optional Board

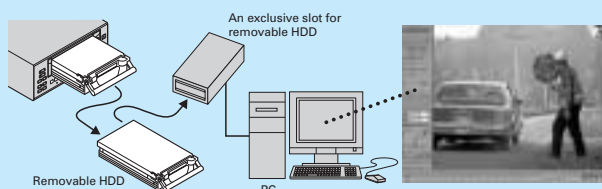
A 10BASE-T / 100BASE-TX LAN connection allows the user to operate the unit from a PC. It is also possible to use SSP (SANYO Security Serial Protocol) on a terminal with RS-485 or RS-232C ports.

Removable HDD Viewer Software

VA-SW300

This software allows the user to playback audio and video recorded on a removable HDD by inserting the HDD into an exclusive slot connected to the PC.

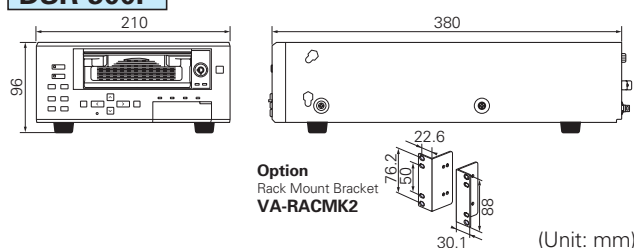
* Supports Windows® 2000 and Windows® XP.



Optional accessories (sold separately)

Hard Disk Tray
VA-DT300Communication Board
VZU-COM300

DSR-300P



MODEL	DSR-300P
General	
Hard disk capacity	Max HDD Capacity (Technically) per One bay 540GB
Picture resolution	720 x 288, 720 x 576 (pixels)
Compression	M-JPEG
Picture quality	5 levels (Basic, Normal, Enhanced, Fine, Super Fine)
Recording speed	27 levels.
Recording area	Normal recording area / Alarm recording area / Archive area
Menu language	English / French / German / Spanish
Clock setup	Day / Month / Year / Hour / Minute / Second
Signal format	PAL color signal standard
Search Mode	
Date / Time search	Search by date and time
Alarm search	Search by alarm event list
Alarm thumbnail search	Search by alarm event thumbnails
Archive area search	Search Archive Area with event list
Motion detection search	Search by specifying a motion sensor in the play back mode
Video	
Video input	1.0 V (p-p) 75 Ω unbalanced (BNC)
Video output	1.0 V (p-p) 75 Ω unbalanced (BNC)
Loop output	1.0 V (p-p) 75 Ω unbalanced (BNC)
Audio	
Audio input	-8db, 27 kΩ unbalanced (RCA pin jack)
Audio output	-8db, 600 Ω unbalanced (RCA pin jack)
Interface	
CompactFlash slot	CompactFlash type II (Front)
LAN terminal	10BASE-T / 100BASE-TX (RJ-45)
RS-485	RJ-11 x 2
RS-232C	D-SUB9 pin
Control signal	
Remote control in	VA-RMN01 remote control or 3.5 mm mini jack
Alarm input	Normal open, Low level active
Alarm output	Normal 5 V DC, Low level active
Alarm reset	Normal open, Low level active
SW out	Switching pulse
Non rec out	Normal 5 V DC, Low level active
Clock adjust input	Normal open, Low level active
Clock adjust output	Normal 5 V DC, Low level active
Warning output	Normal open, Low level active
Full warning output	Normal 5 V DC, Low level active
Alarm full output	Normal 5 V DC, Low level active
Series input	Normal 5 V DC, Low level active
Series output	Normal open, Low level active
Electrical	
AC adaptor	Input: 100 V to 240 V AC, 50/60 Hz Output: 12 V / 5 V DC
Current consumption	13 W
Physical	
Operating conditions	Temperature: 5°C to 40°C [41°F to 104°F], Humidity: 10% to 80%
Dimensions	210(W) x 86(H) x 380(D) mm [8.27(W) x 3.39(H) x 14.96(D) in]
Weight (Approx.)	3.1Kg [6.83 lbs.]

NOTE: Specifications subject to change without notice

Warnings regarding HDDs

- Do not attempt to install or replace a HDD on your own. You cannot use these HDDs on PCs.
- The unit may be damaged if it is exposed to an impact or vibration, or the power plug is disconnected during operation.
- Sanyo will not be held liable for any data loss due to an HDD error or a failure during recording.
- * "Microsoft" and "Internet Explorer" are registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- * All other company and product names are registered trademarks and/or trademarks of their respective owners.

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera Lens

DVR

SSP System

Monitor

Example System

4ch Digital Video Recorder DSR-M814PA



Made in Japan



1ch Digital Video Recorder DSR-M810PA



Made in Japan



Digital capability allowing quick retrieval and easy handling. Features more than two-weeks non-stop real-time recording with outstanding picture quality and audio. Supports networking, as well.

Solid Capabilities in Compact Appearance

DSR-M814PA / DSR-M810PA has a compact body, suitable for small supermarkets and fast food franchises. Its digital recording enables outstanding picture quality and clear sound. In addition, its more than 1400 hours*1 nonstop recording comes with high-definition picture quality, and user can survey live video images and remote-control the device via a network*2.

*1 With a 500GB HDD unit at STANDARD picture quality

*2 With the packaged VA-SW8000LITE or the VA-SW8000, sold separately

Playback and Image Retrieval while Video Recording

DSR-M814PA and DSR-M810PA allow more than 1400 hours of "real-time video" recording in the standard mode, with 720 x 576 pixels and 352 x 576 pixels, respectively. Furthermore, recorded images can be played back simultaneously and impeccable surveillance is possible even while retrieving and playing back desired video images.

Supports up to 1TB HDD per one bay

The unit has two HDD bays, each supporting up to 1TB*3 HDD to make the unit the right choice in today's trend for bigger drives. Select a secondary drive that suits the needs among the optional drives. Selecting a drive of the same capacity will allow the use of the mirroring*4 function for data backup.

For the latest available range of optional drives, contact the place of purchase.

*3 Support for all HDD units introduced in the future can not be guaranteed.

*4 Mirror Recording

DSR-M814PA / DSR-M810PA each comes with two HDD bays. With two HDD's of the same capacity installed, it is possible to record the same video on two HDDs, thus allowing for a backup.

Automatic Switching of 4-screen / Full-screen Display

DSR-M814PA is a "Quad" unit that allows 4-screen display on a single monitor. It also allows a full-screen, sequential display of each channel with automatic switching or a full-screen display of a desired channel.

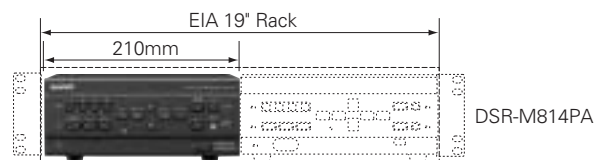
Built-in Motion Sensor *5

DSR-M814PA comes with a built-in motion sensor. Different settings can be made for each channel image independently. The sensor can detect moving objects within the screen by picking up changes in brightness. The user can use this feature to trigger an alarm recording.

*5 available only with the DSR-M814PA

Compact Size of 210 mm Width

Digital recording is now available in a compact package of 210mm in width, which makes it possible to install two DSR-M814PA units side-by-side in an EIA19" rack. It is an ideal solution for the limited spaces of convenience stores, or casinos where a large number of DVRs are needed.



A Variety of Recording Modes

These recorders offer a variety of recording options: Normal Recording for the image being monitored; Timer Recording with a pre-set time; Motion Sensor*5 for when a moving object is detected on-screen; Alarm Recording after an external alarm input; combination of Timer/Alarm Recording; and combination of Motion Sensor and Alarm Recording.

*5 available only with the DSR-M814PA

Various Playback Functions

DSR-M814PA / DSR-M810PA features 6 playback functions: Playback, Still, Cue / Review (2x to 180x), Frame advance, Slow motion (1/8 to 1/2, forward and backward), and Search.

Search Functions

The two search functions — "Alarm Search" and "Time / Date Search" — call up desired images instantly.

Security Lock

There are two levels of security lock — Administrators and Users. — offering users the best option for their security needs.

TV-System Switching between PAL / NTSC

A changeover switch in the back can transfer video signals of surveillance camera input / monitor output to PAL or NTSC format. (Note: this switch only routes the video signal to an appropriate circuit and does not mean that the unit converts a NTSC input to PAL format, or vice versa.) The AC power source is for 120 to 240V.

*This TV-system switching should be selected to PAL or NTSC before it is plugged in the power source.

Built-in USB Terminal

The USB terminal on the front panel gives easy access for backing up data onto a CD-R/RW or a CompactFlash card*6. Downloading and uploading of setup menus by use of a CF card offer an easy option for setting up additional DSR-M814PA / DSR-M810PA recorders.

*6 For a validated CF reader, and CD-R/RW consult www.sanyosecurity.com.

Built-in Control Terminals

These terminals make it possible to control the DSR-M814PA / DSR-M810PA using a Resistive ladder remote controller.

Series Recording

Multiple DSR-M814PA / DSR-M810PA recorders can be connected in a series for vastly increased recording capacity, allowing extended recording at high resolutions and easy storage of recordings.

Built-in RS-485 Terminals

The unit has built-in RS-485 terminals for SSP (SANYO Security Serial Protocol) usage. Separately sold system controller VSP-9000 can control up to 128 units of DSR-M814PA / DSR-M810PA.

Also Comes with a LAN Terminal

There is a built-in 100BASE-TX LAN terminal, allowing remote surveillance / control from PC via LAN with the DVR Utility Software.

DVR Utility Software for DSR-M814PA and DSR-M810PA

VA-SW8000LITE software is included in the product package. By installing this software on a PC, it is possible to connect the PC and DVRs over a LAN and monitor live video or control DVRs on the PC.

System environment

Computer	IBM PC / AT or Compatible
OS	Windows® XP Professional SP2
CPU*1	Pentium® 4, 3GHz or higher
Memory	512MB or more
Interface	100BASE-TX, USB(1.1)
Display	XGA (1,024 x 768 pixel), 16-million color or higher*1
	AGP graphics card with hardware overlay support or PCI Express graphics card*2
	<Recommended graphics chip>
	ATI : RADEON9000 series or higher
	nVidia : Geforce4 series or higher, Quadro4 series or higher
	Matrox: Millennium P 4 series or higher
Sound	Sound card with 48kHz stereo playback support (PCI connection recommended)*3

*1 When using the software at a resolution of 1024 x 768 pixels, open Windows Task bar Properties dialog box and select the "Auto hide" check box.

*2 Requires the latest DirectX®9.0c compatible driver.

*3 A sound card is required to the sound part in live or played back video.

A high-end software package VA-SW8000 is also available (sold separately).

High-end software package

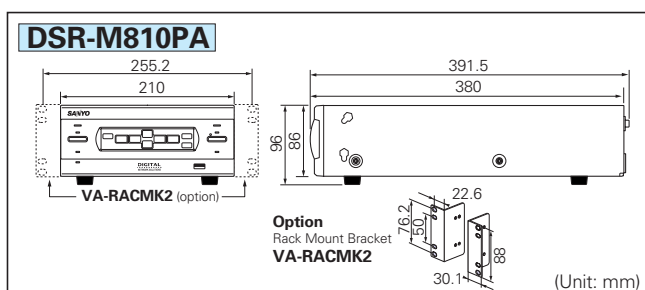
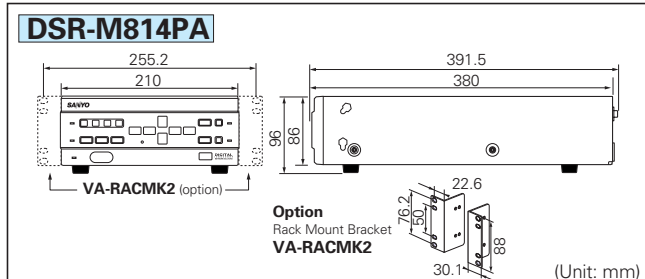
DVR Utility Software VA-SW8000 (sold separately)

By installing VA-SW8000 in a PC, the user can build a remote surveillance system that links DVRs and the PC via a LAN. In addition to setting up each recorder, recording, retrieval, playback and live surveillance options are available. Moreover, up to 4000 DVRs in a network can be controlled by the PC. Complete security is provided by ID-password protection with four levels of accessibility. In addition, the software features a function that verifies the authenticity of data by detecting any alteration made to recorded images.



NOTE: Refer to the required system environment shown above.

- Buzzer
- Video loss alarm
- 30-day memory backup
- Resume function
- Disk full alarm
- On-screen mode setting, menu languages built in: English / French / German / Spanish
- Built-in time date generator
- Clock adjustment
- Alarm counter
- Alarm search
- Auto delete
- Time / Date search
- Forward / reverse frame advance
- Automatic summer time adjustment
- Lifetime counter
- Through output of video
- Push-lock terminals for easy installation



MODEL	DSR-M814PA	DSR-M810PA
General	Max HDD Capacity (Technically) per One bay 1TB	
Hard disk capacity	PAL: 720 x 576 NTSC: 720 x 480 (Super+ / Super / High / Standard)	
Picture resolution	PAL: 720 x 576 NTSC: 720 x 480 (Super+ / Super / High / Standard)	
Compression	MPEG2 (Video), MPEG1 Audio layer2 (Audio)	
Picture quality	4 levels (Super+ / Super / High / Standard)	
Recording speed	PAL: 50 IPS NTSC: 60 IPS	
Screen display	1-screen display / 4-screen display	1-screen display
Number of cameras	4	1
Menu language	English / French / German / Spanish	
Clock setup	Month / Day / Year / Hour / Minute / Second	
Signal format	PAL / NTSC color signal standard (Switchable)	
Play back	Playback / Still / Search / Cue / Review / Frame advance / Slow	
Search mode	Search by date and time	
Date / Time search	Search by alarm event list	
Alarm search	Search by alarm event list	
Video		
Video input	1.0 V (p-p) 75 Ω unbalanced (BNC x 4)	1.0 V (p-p) 75 Ω unbalanced (BNC)
Video output	1.0 V (p-p) 75 Ω unbalanced (BNC x 4)	1.0 V (p-p) 75 Ω unbalanced (BNC)
Monitor output	1.0 V (p-p) 75 Ω unbalanced (BNC x 1)	1.0 V (p-p) 75 Ω unbalanced (BNC)
Audio		
Audio input	-8db, 27 kΩ unbalanced (RCA pin jack x 4)	-8db, 27 kΩ unbalanced (RCA pin jack)
Audio output	-8db, 600 Ω unbalanced (RCA pin jack)	
Microphone input	-60dB, 10 kΩ unbalanced (3.5mm mini jack)	
Interface		
LAN terminal	100BASE-TX (RJ-45)	
USB terminal	For CompactFlash reader (Front), CD-R / RW	
Control signal		
RS-485	3 terminals: A / B / GND	
Remote control in	External switch connection	
Clock adjust input	Normal open, Low level active	
Clock adjust output	Normal 5 V, Low level active	
Non REC output	Normal 5 V, Low level active	
Alarm input	Normal open, Low level active x 4	Normal open, Low level active
Alarm output	Normal 5 V, Low level active	
Alarm reset input	Normal open, Low level active	
Warning output	Open collector (500mA), Low level active	
Full output warning	Open collector (50mA), Low level active	
Series REC input	Normal open, Low level active	
Series REC output	Normal 5 V, Low level active	
Electrical		
Power source	120 V to 240 V AC, 50 / 60 Hz	
Current consumption	600 mA	
Physical		
Operating conditions	Temperature: 5°C to 40°C [41°F to 104°F], Humidity: 10% to 80%	
Dimensions	210(W) x 86(H) x 391.5(D) mm [8.27(W) x 3.39(H) x 15.41(D) in.]	
Weight (Approx.)	3.7kg [8.2 lbs.]	3.6kg [7.9 lbs.]

NOTE: Specifications subject to change without notice

Warnings regarding HDDs

- Do not attempt to install or replace a HDD on your own. You cannot use these HDDs on PCs.
- The unit may be damaged if it is exposed to an impact or vibration, or the power plug is disconnected during operation.
- SANYO will not be held liable for any data loss due to an HDD error or a failure during recording.
- "Microsoft" is registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- All other company and product names are registered trademarks and/or trademarks of their respective owners.

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera · Lens

DVR

SSP System

Monitor

Example System

16-4ch Monitoring with Quality Picture of MPEG-4 and Full Motion Picture of 200 IPS*

*Only DSR-2016

MPEG-4 Enables Speedy and Glitch-Free Monitoring over a Network

MPEG-4

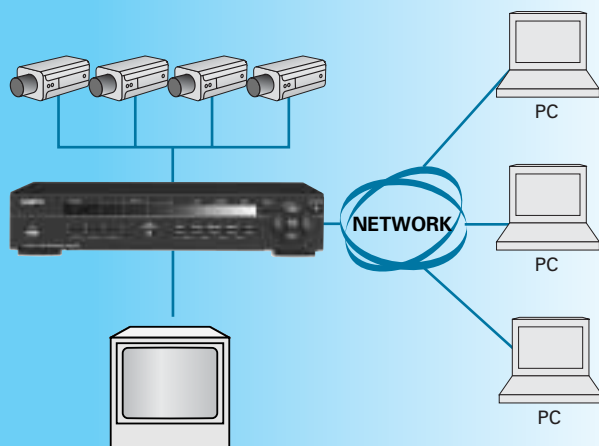
The MPEG (Moving Picture Experts Group) 4 standard was designed to reproduce a wide range of moving pictures from those on a low speed communication line to those with high-definition TV picture quality. It is especially effective for application on low speed networks. While conventional MPEG1/2 encodes only portions of the picture that have changed from the key frames, MPEG-4 employs a new technique to disassemble a frame into objects. Simply put, it disassembles a picture into elements such as backgrounds, persons, buildings, etc. and records differentials of each object. The method is similar to that of M-JPEG recording format and things that can be handled as MPEG-4 objects are not limited to of physical nature, but include audio as well.

Low Rate but High Quality

Since MPEG-4 offers quality pictures at a low bit-rate, it is possible to record pictures for a considerably longer time compared to JPEG.

Network

DSR-2016 / DSR-2004 offers network connectivity with LAN and WAN. MPEG is an international standard for highly efficient digital encoding (compression) of video and audio signal and is indispensable for video signal compression and transmission over a network. Compared to conventional systems, DSR-2016 / DSR-2004 offers improved surveillance video transmission — clear pictures at low bit-rate — by the adoption of MPEG-4.



16ch MPEG-4 Digital Video Recorder

DSR-2016

Coming soon



Simultaneous Recording/Playback at 200 IPS (DSR-2016)

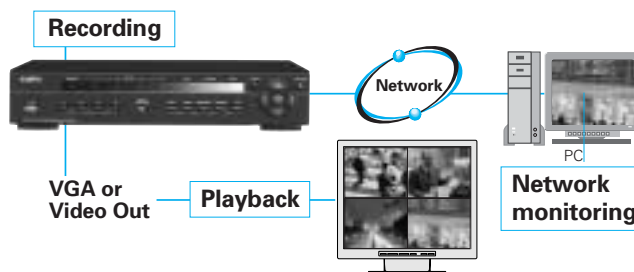
The DSR-2016 offers the capability to smoothly record and playback movement at a maximum rate of 200IPS. It also features two HDD bays, enabling expansion of storage capacity up to 1TB.

Simultaneous Recording and Playback

The simultaneous recording and playback function makes it possible for the user to review recorded images without interrupting the recording in progress (in the CIF mode, 360x240 pixels).

Triplex Function

The Triplex function of DSR-2016 / DSR-2004 makes it possible to perform three functions simultaneously, i.e. recording, playback, and network monitoring.



Built-in Motion Sensor

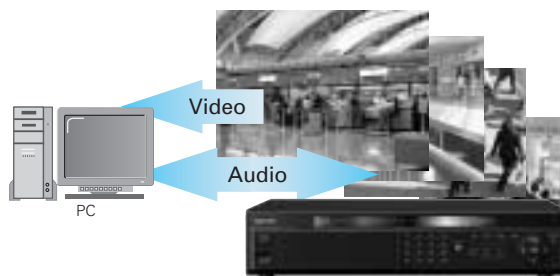
DSR-2016 / DSR-2004 comes with a built-in motion sensor. Different settings can be made for each channel image independently. The sensor can detect moving objects within the screen by picking up changes in brightness. The user can use this feature to trigger an alarm recording.

Audio Recording Available

The unit comes with 4ch input and 1ch output terminals to enable audio recording of each channel.

Two-way Audio over a Network

During a remote surveillance, it is possible not only to receive audio, but also to send a warning message to the point of surveillance.



4ch MPEG-4 Digital Video Recorder

DSR-2004



Standard Configuration Includes a CD-R/RW Drive (DSR-2016)

The DSR-2016 comes with a CD-R/RW drive and does not require additional devices for backing up images and settings.

Auto-recording with Optimum File Size

DSR-2016 / DSR-2004 automatically selects an optimum file size depending on the input signal to make recordings with the same picture quality. The recording time changes depending on the input signal.

Network Connection

A variety of remote operations such as live image surveillance, main unit operation, etc. can be performed via a LAN or ADSL network connection.

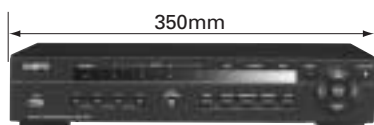
Easy Backup

Supports the use of USB memory sticks. This makes it easy to backup not only still images, but also videos in AVI format.



Compact Size of 350 mm Width (DSR-2004)

Digital recording is now available in a compact package of 350 mm in width. It is an ideal solution for the limited spaces of convenience stores and retail chains, where a large number of DVRs are needed.



Search Functions

The three search functions — "Event Search", "Time / Date Search" and "Time line Search" — call up desired images instantly.

Security Lock

Security lock — offering users the best option for their security needs.

IR Remote Control

The IR remote controller allows the user to control up to nine DVRs.

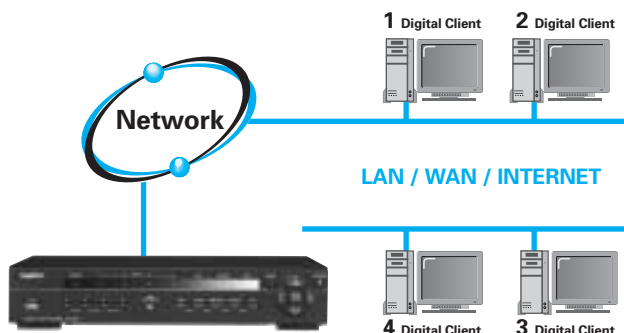
Rear Connectors for Essential Needs

Though it's compact, the rear panel provides terminals for essential devices including a microphone and speakers.

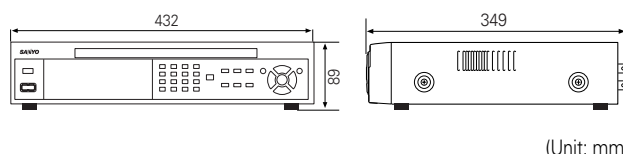
Others

- VGA out • Supports DDNS • LIVE capture

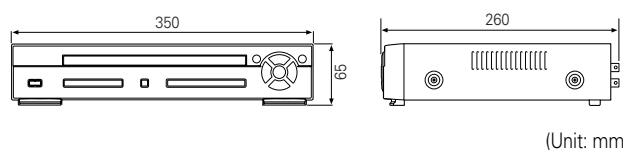
DSR-2016 / DSR-2004 supports up to four concurrent Digital Client users



DSR-2016



DSR-2004



MODEL	DSR-2016	DSR-2004
General	Max HDD Capacity 540GB	
Hard disk capacity	Max HDD Capacity 540GB	
Picture resolution	704 x 576, 704 x 288, 352 x 288 (pixels)	704 x 576, 352 x 288 (pixels)
Compression	MPEG-4	
Picture quality	3 levels (Basic, Normal, Fine)	
Recording speed	400IPS / 16ch (360 x 288/ch), 25 IPS / 4ch (720 x 576/ch)	100IPS / 4ch (360 x 288/ch), 25 IPS / 4ch (720 x 576/ch)
Still image capture	720 x 576, 360 x 288	
Number of cameras	16	4
Menu language	English / French / German / Spanish / Italian / Russian / Chinese / Polish / Czech / Swedish / Rumanian / Bulgarian / Serbian / Thai / Japanese	
Telemetry control protocol	SANYO (H-SSP) / PELCO-D / KALATEL / VICON / SENSORMATIC / ELMO	
Search Mode	Event Search, Time / Date Search, Time line Search	
Video		
Signal format	PAL standard (Color) / CCIR standard (B/W) auto select, 625 lines, 200 IPS	PAL standard (Color) / CCIR standard (B/W) auto select, 625 lines, 100 IPS
Video input	VBS / VS 1.0 V (p-p) 75 Ω BNC x 16	VBS / VS 1.0 V (p-p) 75 Ω BNC x 4
VGA output	VGA x1 *	
S-video input	x1	
Main monitor output	VBS 1.0 V (p-p) 75 Ω BNC x 1 *	
Audio		
Audio input	-8 dBs 27 kΩ unbalanced RCA x 4	
Audio output	-8 dBs 600 Ω unbalanced RCA x 1	
Backup		
USB	Still image & Video data	
CD-R/RW	Built-in CD-R/RW	
Net		
Interface	ADSL, LAN / Dynamic IP supported	
LAN port	10BASE-T / 100BASE-TX	
Control		
Sensor alarm input	x 4	
Alarm output	x 1 (0.5 A 12.5 V AC, 1 A 30 V DC) [Values in parentheses are the relay ratings inside the DSR-2016/DSR-2004.]	
Remote control	IR remote control can control up to 9 units	
Electrical		
Power source	Input: 100 V to 240 V AC, 50/60 Hz Output: 12 V DC	
Power consumption	90 W / 12 V	25 W / 12 V
Operating conditions	Temperature: 5°C to 40°C [41°F to 104°F], Humidity: 80% or less	
Physical		
Dimensions	432(W) x 89(H) x 349(D) mm [17 (W) x 3.5 (H) x 13.7 (D) in]	350(W) x 65(H) x 260(D) mm [13.8 (W) x 2.6 (H) x 10.2 (D) in]
Weight	6.4kg [225.7 oz] (with one HDD unit)	3.2kg [112.9 oz] (with one HDD unit)

NOTE: Specifications subject to change without notice

*1 Either the video output or VGA output can be enabled at any one time.

Warnings regarding HDDs

- Do not attempt to install or replace a HDD on your own. You cannot use these HDDs on PCs.
- The unit may be damaged if it is exposed to an impact or vibration, or the power plug is disconnected during operation.
- Sanyo will not be held liable for any data loss due to an HDD error or a failure during recording.
- * "Microsoft" is registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- * All other company and product names are registered trademarks and/or trademarks of their respective owners.

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera · Lens

DVR

SSP System

Monitor

Example System



LCD flat panel

Flat panel displays

These SXGA grade monitors display clear and crisp pictures. The thin package makes them the ideal choice for applications with limited space.

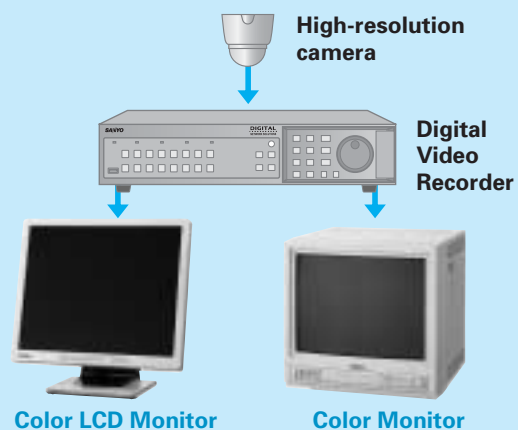
Front switches

Easy to access front panel switches






Ease of operation is the focus of this design. The user can switch the display, set the volume, and set the scan from switches on the front panel.

Save Space with LCD Monitors! The line-up with Crisp Pictures also Includes Color Monitors.

Super High-resolution

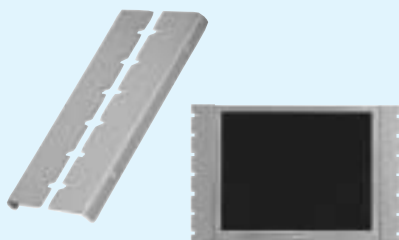


Reproduce Faithful Images with SANYO Monitors

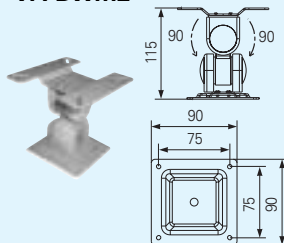
Category	Color LCD monitor			Color monitor	
Serial No.	 VMC-L1019P	 VMC-L1017P	 VMC-L1015P	 VMC-8619PA	 VMC-8615FP
LCD	✓	✓	✓	—	—
Horizontal resolution	500 TVL	500 TVL	500 TVL	800 TVL	800 TVL
Video input	1	1	1	A / B	A / B
S-VIDEO	✓	✓	✓	✓	✓
Durable Metal	—	—	—	✓	✓
Multi system	✓	✓	✓	✓	✓
Scan	1 : 1 / Under / Over / Full scan	1 : 1 / Under / Over / Full scan	1 : 1 / Under / Over / Full scan	Overscan underscan	Overscan underscan
Speaker	✓	✓	✓	✓	✓
Power supply	12 V DC (AC adaptor)	12 V DC (AC adaptor)	12 V DC (AC adaptor)	100 V to 240 V AC 50 / 60 Hz	100 V to 240 V AC 50 / 60 Hz
Termination	Auto	Auto	Auto	Auto	Auto
Page	54	54	54	55	55

Optional accessories for LCD monitor

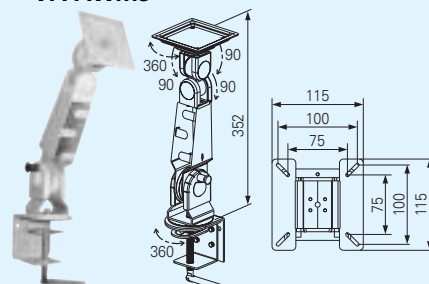
• Rack Mounting Bracket VA-RACMK 15 / 17 / 19



• Wall Mounting Bracket VA-BWM2



• Arm Bracket VA-AWM3



19" Color LCD Monitor VMC-L1019P



- Slim, Lightweight and Portable styling
- TV Level Genesis Scalar IC
- Picture in Picture Showing an additional small display in the upper left corner of the screen.
- Scan type : 1:1 / Under / Over / Full—selectable from the front panel
- On-screen mode setting, menu languages built in: English / French / German / Spanish / Italian / Chinese / Japanese

17" Color LCD Monitor VMC-L1017P



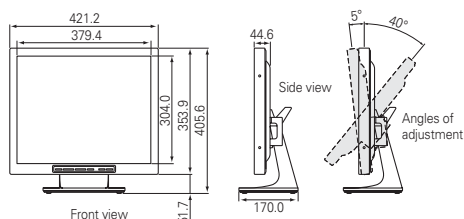
- Slim, Lightweight and Portable styling
- TV Level Genesis Scalar IC
- Picture in Picture Showing an additional small display in the upper left corner of the screen.
- Scan type : 1:1 / Under / Over / Full—selectable from the front panel
- On-screen mode setting, menu languages built in: English / French / German / Spanish / Italian / Chinese / Japanese

15" Color LCD Monitor VMC-L1015P

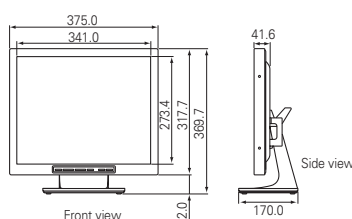


- Slim, Lightweight and Portable styling
- TV Level Genesis Scalar IC
- Picture in Picture Showing an additional small display in the upper left corner of the screen.
- Scan type : 1:1 / Under / Over / Full—selectable from the front panel
- On-screen mode setting, menu languages built in: English / French / German / Spanish / Italian / Chinese / Japanese

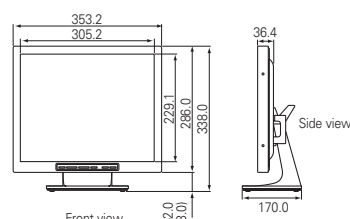
VMC-L1019P



VMC-L1017P



VMC-L1015P



[Unit: mm]

MODEL	VMC-L1019P	VMC-L1017P	VMC-L1015P
Color system	PAL / NTSC, Automatic detection		
LCD display	19" active matrix TFT LCD panel	17" active matrix TFT LCD panel	15" active matrix TFT LCD panel
Screen size	480 mm diagonal	432 mm diagonal	381 mm diagonal
Viewable size (H x V)	376 x 301 mm (5:4)	337 x 270 mm (5:4)	304 x 228 mm (4:3)
Pixel pitch (H x V)	0.294 x 0.294 mm	0.264 x 0.264 mm	0.297 x 0.297 mm
Horizontal resolution	500 TV lines or more (Y/C input mode)		
	1280 x 1024		1024 x 768
Scanning frequency	Horizontal: 30 K to 80 KHz, Vertical: 56 Hz to 75 Hz		
Contrast ratio	500:1		
Brightness	300 cd/m ²		250 cd/m ²
Response time Tr / Tf	15/10 ms	2/6 ms	5/11 ms
Display color	16.7 M		
View Angle	Left / Right: 75° / 75°, Up / Down: 70° / 60°		Left / Right: 70° / 70°, Up / Down: 60° / 65°
Display monitor timing	VESA compatible		
Display mode	VIDEO / S-VIDEO / VGA		
Input connector	Composite sync signal, 1.0 V (p-p) 75Ω BNC connector		
	S-Video signal Separate Y/C signal, mini-DIN connector, Y signal: 1.0 V (p-p) 75Ω negative sync, C signal: 0.286 V (p-p) 75Ω negative sync		
	Audio signal -6 dBs (400 m Vrms), RCA pin		
Output connector	VGA signal VGA Monitor Connector (15-pin), R, G, B: 0.7 V (p-p) 75Ω, positive sync		
	Video signal Composite sync signal, 1.0 V (p-p) 75Ω BNC connector		
	S-Video signal Separate Y/C signal, mini-DIN connector, Y signal: 1.0 V (p-p), 75Ω negative sync, C signal: 0.286 V (p-p), 75Ω negative sync		
	Audio signal -6 dBs (400 m Vrms), RCA pin		
Menu language	English / French / German / Spanish / Italian / Chinese / Japanese		
Audio power output (approx.)	1 W		
Power input	12 V DC / 4.16 A (AC adaptor included)		
Operating condition	Temperature: 0°C to 40°C [32°F to 104°F] (Humidity: 20% to 85% RH)		
Power consumption (approx.)	50 W		40 W
Dimensions (W x H x D)	420.6 x 405.3 x 170.0 mm [16.6 x 16.0 x 6.7 in]	375.0 x 376.0 x 170.0 mm [14.8 x 14.6 x 6.7 in]	353.2 x 338.0 x 170.0 mm [13.9 x 13.3 x 6.7 in]
Weight (AC adaptor included)	6.1 kg [13.5 lbs.]	5.0 kg [11.0 lbs.]	4.0 kg [8.8 lbs.]

NOTE: Specifications subject to change without notice

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera · Lens

DVR

SSP System

Monitor

Example System

19" Super High-resolution
Color Video Monitor
VMC-8619PA



15" Super High-resolution
Color Video Monitor
VMC-8615FP



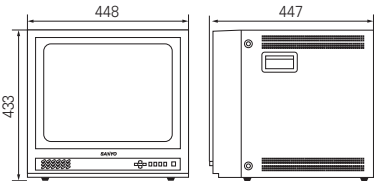
Super High-resolution

- Three channels of audio and video input, — selectable from the front panel
- Overscan / underscan selectable from the front panel
- On-screen mode setting, menu languages built in: English / French / German / Spanish / Italian / Russian / Chinese / Japanese
- Built-in compact loudspeaker (1W)
- Images signal input / output terminal allows a bridge connection
- Automatic Voltage selector, 100 V to 240 V AC, 50 / 60 Hz

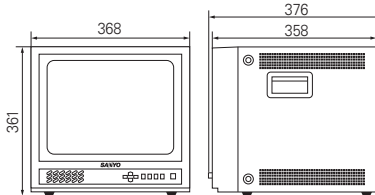
Super High-resolution

- Three channels of audio and video input, — selectable from the front panel
- On-screen mode setting, menu languages built in: English / French / German / Spanish / Italian / Russian / Chinese / Japanese
- Built-in compact loudspeaker (1W)
- Overscan / underscan selectable from the front panel
- Images signal input / output terminal allows a bridge connection
- Automatic Voltage selector, 100 V to 240 V AC, 50 / 60 Hz

VMC-8619PA



VMC-8615FP



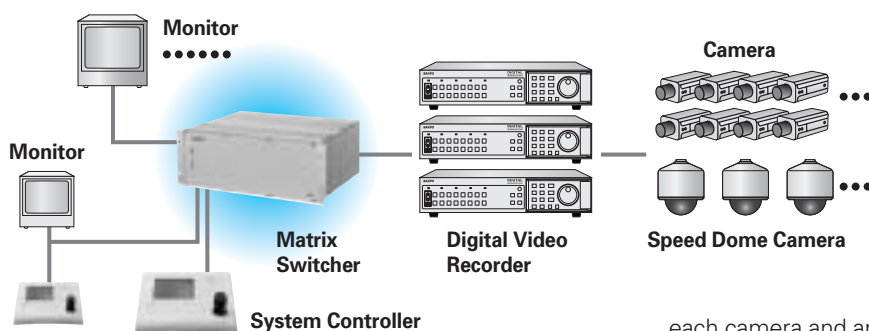
[Unit: mm]

MODEL	VMC-8619PA	VMC-8615FP
Color system	PAL / NTSC, Automatic detection	
CRT	19" 90° deflection, dot pitch:0.27mm	15" 90° deflection, dot pitch: 0.27 mm
Scanning frequency	H: 15.625 kHz, V: 50 Hz (PAL) H: 15.734 kHz, V: 59.94 Hz (NTSC)	
Horizontal resolution	More than 800 TV lines	
Input terminals	Composite video input A	1.0 V (p-p), 75 Ω, negative sync., BNC x 1, bridged-out possible, auto-termination
	Composite video input B	1.0 V (p-p), 75 Ω, negative sync., BNC x 1, bridged-out possible, auto-termination
	S-VIDEO	Y: 1.0 V (p-p), 75 Ω, negative sync. C: 0.3 V (p-p), 75 Ω (PAL) 0.286 V (p-p), 75 Ω (NTSC)
	Audio input	Mini-DIN 4-pin x 1, bridged-out possible, auto-termination
Output terminals	RCA x 3, bridged-out possible	
	Video out A, loop-through, BNC x 1	
	Video out B, loop-through, BNC x 1	
	S-Video out, loop-through, Mini-DIN 4-pin x 1	
Built-in speaker	x 1	
Audio output	1 W	
Power source	100 V to 240 V AC, 50 / 60 Hz	
Power consumption	95 W	
Operating conditions	-10°C to 50°C [14°F to 122°F] (Humidity: 10% to 90% RH)	
Dimensions	448(W) x 433(H) x 447(D) mm [17.6(W) x 17.1(H) x 17.6(D) in.]	368(W) x 361(H) x 376(D) mm [14.5(W) x 14.2(H) x 14.8(D) in.]
Weight	25 kg [55.1 lbs.]	15 kg [33.1 lbs.]

NOTE: Specifications subject to change without notice

Matrix Switcher

MPX-MX2005



High Density Scalable Matrix Switcher

SANYO's Matrix Switcher MX Series is a modular security system based on a microprocessor and supports up to 1,024 inputs and up to 96 outputs with a single matrix system. A large number of video inputs (10,000) and outputs (1,000) can be controlled from a single controller.

General

The modular design of the Matrix Switcher makes it easy to expand the system to a maximum of 16 cards. Both 4U and 8U rack-mount housing is available for the switcher with a single 4U bay holding 112 video inputs and 16 outputs.

Modular Construction

The Matrix Switcher is easily expanded using slots for expansion modules. The housing holds up to 16 cards.

Multi-Protocol Support (SSP-Compatible)

The Matrix Switcher is controllable from SANYO VSP-9000 or any other SSP-compatible control device. By using the new Touch Panel Controller with user-friendly graphical user interface, the user can easily control and set up the Matrix Switcher. At the same time, the controller can be used to control other devices supporting SSP protocol, such as SANYO dome cameras, multiplexers, DVRs and VCRs. Integration of other devices can be also achieved by the use of an optional SSP receiver.

Compatibility (Pelco, Ernitec and AD)

The Matrix Switcher also supports Pan/Tilt/Zoom or dome cameras from different manufacturers. This makes the switcher highly compatible and allows the user to integrate existing cameras into a new system. Either a fixed camera or a Pan/Tilt/Zoom camera may be connected to each video input.

The RS-485 bus system supports up to 128 matrix units on a single bus. The number of Matrix Switchers that can be controlled using the TCP/IP protocol for LAN or WAN networks is almost unlimited.

Control

Use one of the following options to control the Matrix Switcher.

1. VSP-9000 controller or any other SSP-compatible controller
2. Any PC on the same network as the matrix via a TCP/IP connection. The control software is included in the package.
3. Using the optional custom-made software with a graphical map interface. This software needs to be installed in a PC, from which control is performed through a TCP/IP connection.

Network Support and LAN

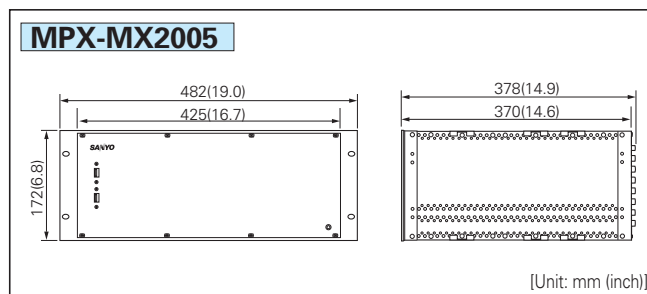
The Matrix Switcher can be controlled by using a TCP/IP connection, either from a touch panel controller or a PC and existing networks.

Timer Functions

It is possible to program over 100 camera and monitor tours individually.

Alarm Management

With an optional order, the system comes with an external alarm input for each camera and an external alarm output for each monitor. Each alarm signal can be configured to call any camera to any monitor, to put a dome camera to any preset position, or to start tours or sequences.



MODEL	MPX-MX2005
Video format	PAL / NTSC
Input signal / Input impedance	1.0 Vp-p / 75Ω
Output signal / Output impedance	1.0 Vp-p / 75Ω
Video input	64 (up to 1,024 [BNC])
Video output	16 (up to 96 [BNC])
Alarm input	16 (up to DI-1024)
Alarm output	8 (up to DO-512)
Communication	RS-232C, RS-485, USB, Ethernet
Communication speed	19,200bps
PTZ camera control	3 x RS-485
On screen display	Date, time, video number, video title, monitor status
Text insertion	Each up to 20 characters
Dimension	482 (W) x 378 (H) x 172 (D) mm [19.0(W) x 14.9(H) x 6.8(D) in.]
Power requirements / Frequency	100 V to 240 V AC ± 10%, 50 / 60 Hz

NOTE: Specifications subject to change without notice

Option

	Extension Box MPX-EX200		8ch Main Board VA-EX8MB
	Extension Box with power MPX-EX210		8ch Extension Board VA-EX8EB
	Video Distribution Box MPX-EX300		8ch Extension Board w/coaxial VA-EX8CB
			32ch Alarm Board VA-EX8AB

Security System Solutions

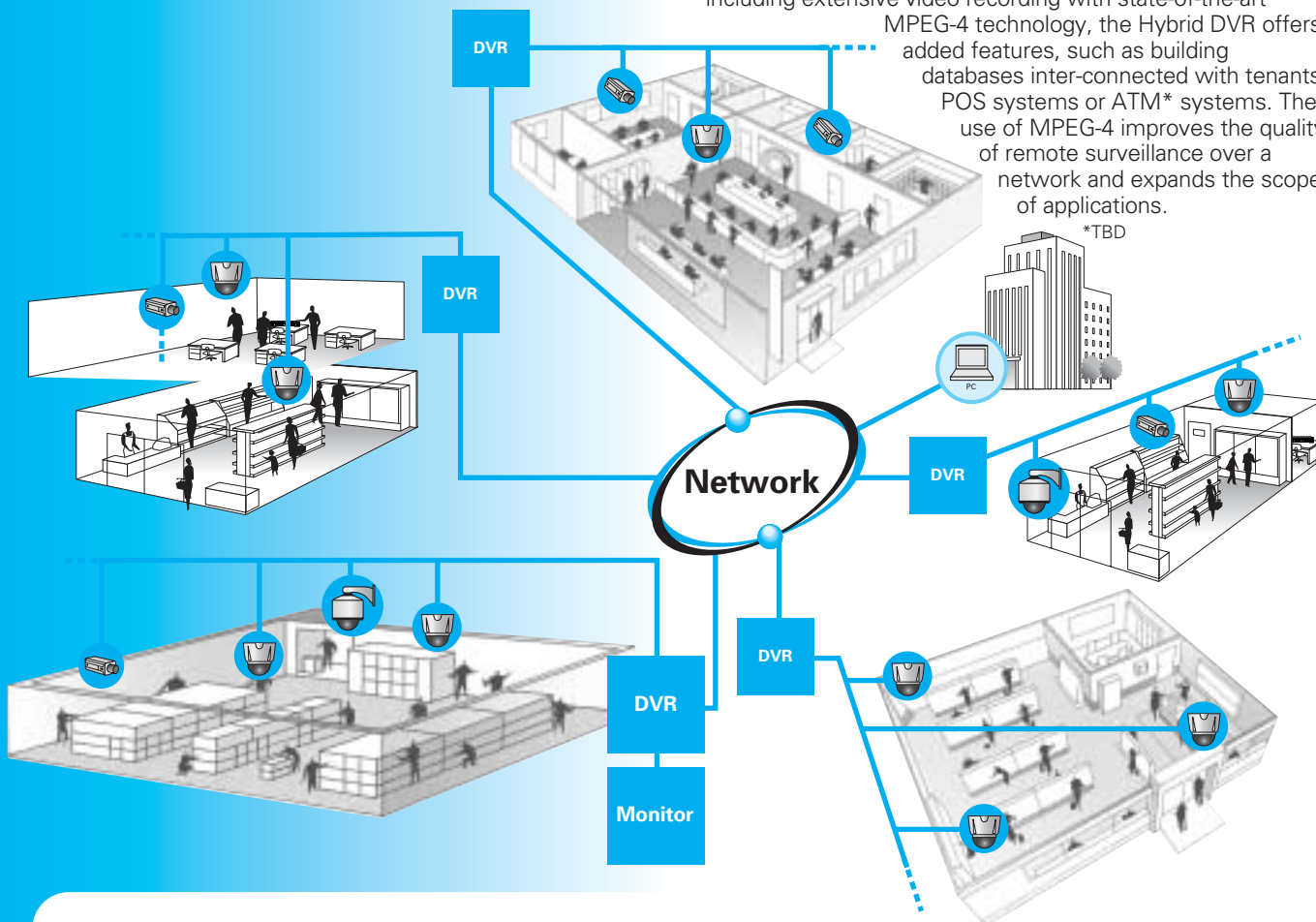
Monitor Plus

Connect shops and branch offices with a network for better management. The DSR-HB8000 can manage up to 80 cameras via a Monitor Plus network.

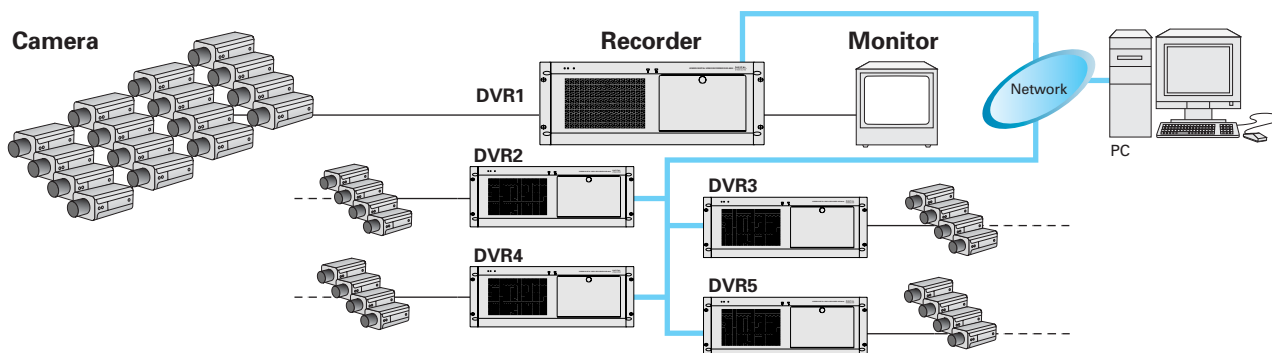
A Network Built Around a Hybrid DVR Provides an Optimum Solution for Remote Surveillance

In addition to normal surveillance and recording operations, including extensive video recording with state-of-the-art MPEG-4 technology, the Hybrid DVR offers added features, such as building databases inter-connected with tenants' POS systems or ATM* systems. The use of MPEG-4 improves the quality of remote surveillance over a network and expands the scope of applications.

*TBD



System configuration



Choose from the Sanyo line up

Replaceable Lens Camera

VCC-WD8575P (D/N) VCC-4795P (D/N)
VCC-6592P VCC-4790P (D/N)
VCC-6585P VCC-4115PA
VCC-6580P VCC-4110P
VCC-5885P

Dome-shaped Camera

VCC-9615P

Speed Dome Camera

VCC-9800P (D/N) VCC-9600P (D/N)
VCC-9700P VCC-9500P

AF Zoom Camera

VCC-ZM400P (D/N) VCC-ZM300PA

Weatherproof AF Zoom Camera

VCC-XZ400P (D/N)

Vandal Resistant Dome Camera

VDC-W1595VP
VDC-D1585VP (D/N)
VDC-C1575VP

Pan-focus Weatherproof AF Zoom Camera

VCC-XZ200P (D/N)

Pan-focus Dome Camera with PT mechanism

VDC-DPN9585P (Network) (D/N)
VCC-PN9575P (Network)
VDC-DP9585P (D/N)
VCC-P9575P

Pan-focus Dome Camera B/W Camera

VDC-DP7585P (D/N)
VCC-P7575PA
VCB-3455P
VCB-3450P
VCB-3385P
VCB-3380P

Digital Video Recorder DSR-HB8000

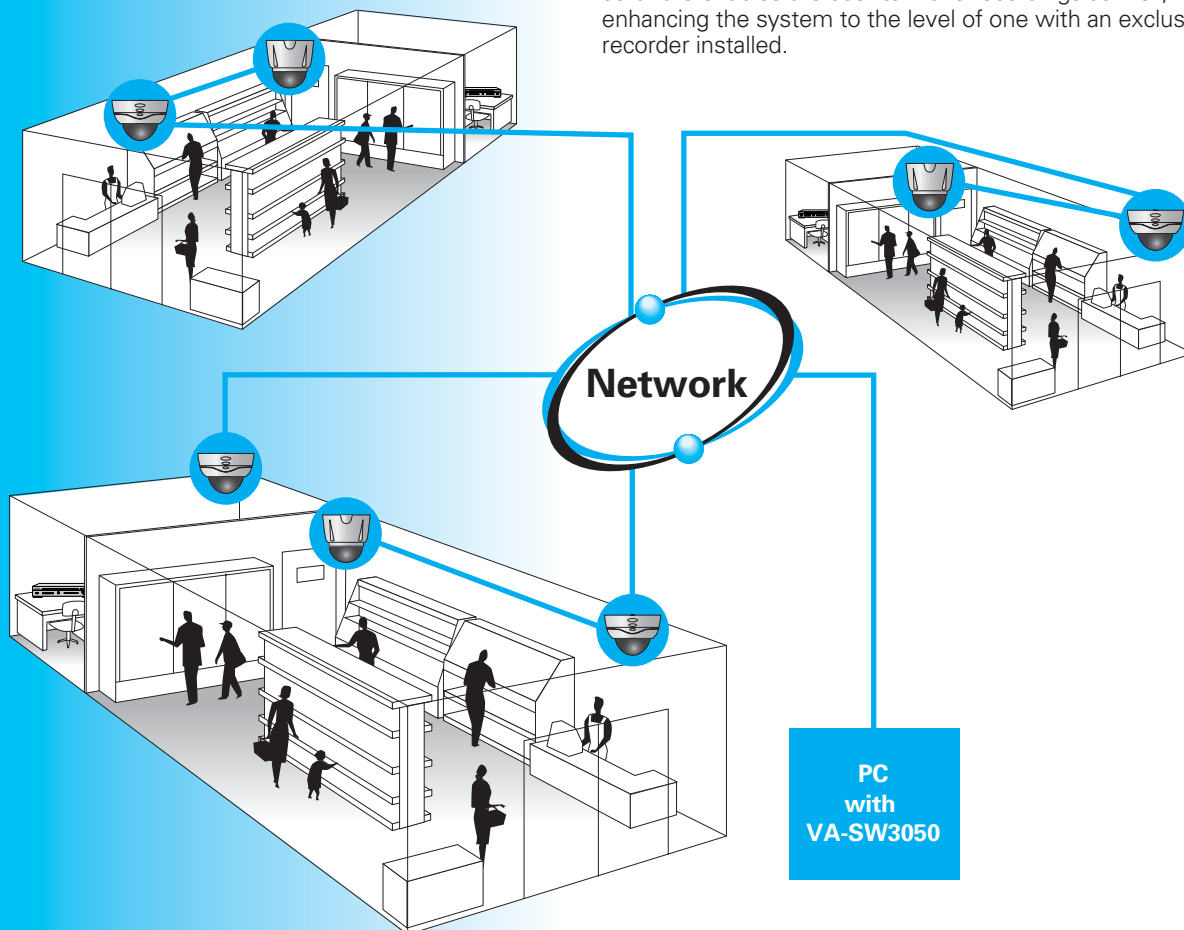
Monitor

VMC-L1019P
VMC-L1017P
VMC-L1015P
VMC-8619PA
VMC-8615FP

Security System Solutions

Network

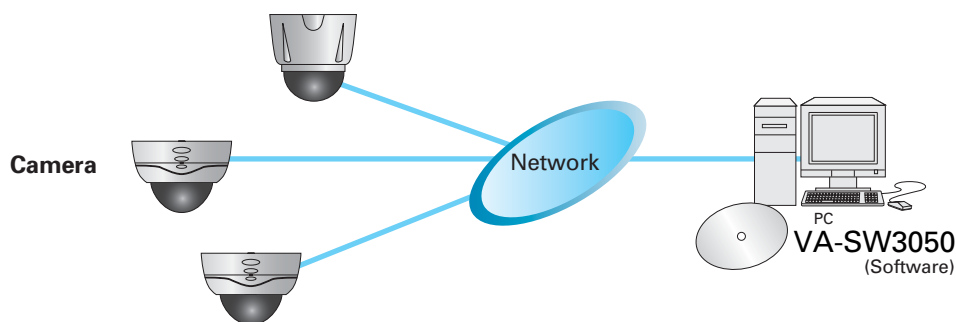
Exchange information over a network with retail shops and franchise shops.



Remote Surveillance System with Network Cameras

A remote surveillance system can be built simply by using network cameras and installing viewing software on a PC that has a network connection. Optional use of VA-SW3050 software enables the user to make recordings as well, enhancing the system to the level of one with an exclusive recorder installed.

System configuration



Choose from the Sanyo Network line up

Speed Dome Camera

VCC-9800P (D/N)
+ VA-80LAN or VA-82LAN
VCC-9700P
+ VA-80LAN or VA-82LAN
VCC-9600P (D/N)
+ VA-80LAN or VA-82LAN
VCC-9500P
+ VA-80LAN or VA-82LAN

Pan-focus Weatherproof AF Zoom Camera

VCC-XZ200P (D/N)
+ VA-20LAN

Pan-focus Dome Camera with PT mechanism

VDC-DPN9585P (D/N)
VCC-PN9575P

Pan-focus Dome Camera

VDC-DP7585P (D/N)
+ VA-50LAN or VA-51LAN
VCC-P7575PA
+ VA-50LAN or VA-51LAN

Network recorder (Software)

VA-SW3050

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera · Lens

DVR

SSP System

Monitor

Example System

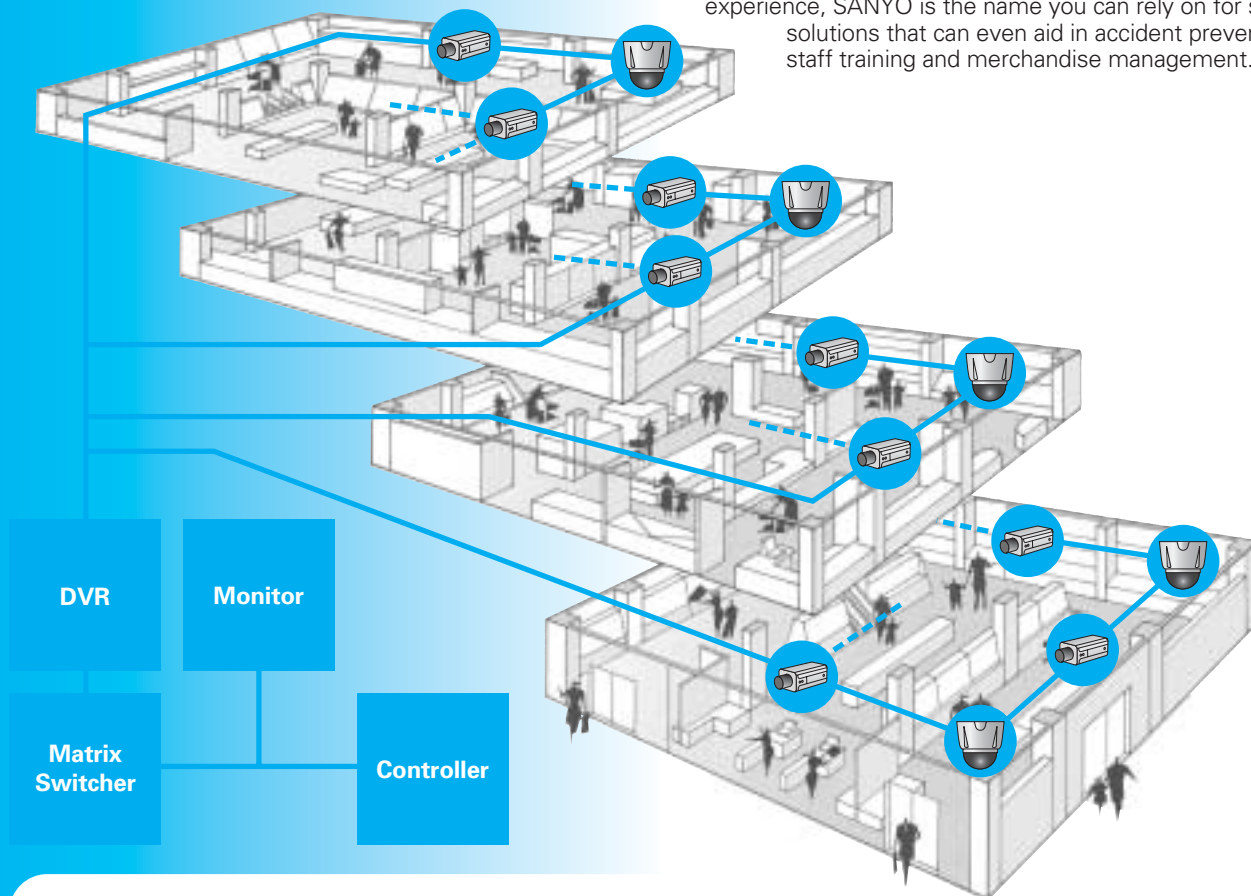
Security System Solutions

Large-scale Retail Facilities

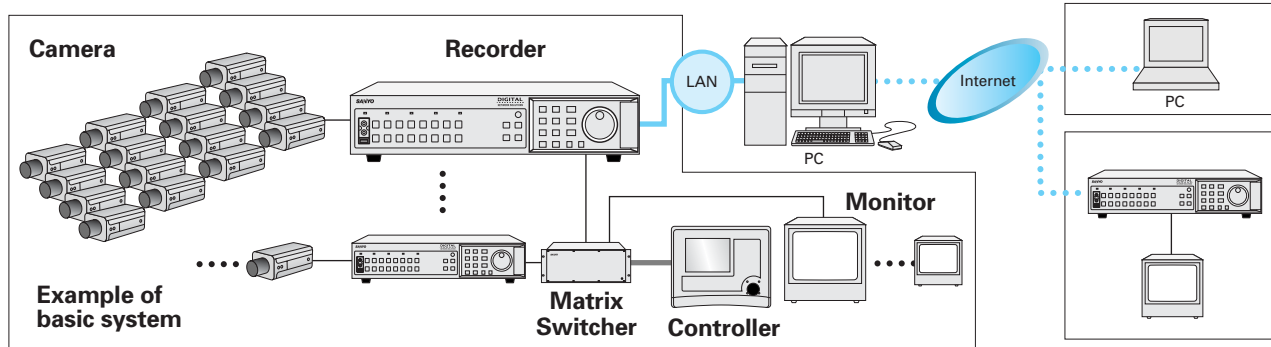
Surveillance systems for department stores, shopping centers, home appliance and DIY outlets, and other premises with expansive sales floors

Creating a Pleasant and Safe Shopping Environment for Your Customers

Superstores and other large retail establishments are bustling centers of local activity where people from all walks of life gather to shop. For security systems that offer everyone from small children to seniors a pleasant and safe shopping experience, SANYO is the name you can rely on for sure-fire solutions that can even aid in accident prevention, staff training and merchandise management.



System configuration



Choose from the Sanyo line up

Replaceable Lens Camera

VCC-WD8575P (D/N) VCC-4795P (D/N)
VCC-6592P VCC-4790P (D/N)
VCC-6585P VCC-4115PA
VCC-6580P VCC-4110P
VCC-5885P

Dome-shaped Camera

VCC-9615P

Speed Dome Camera

VCC-9800P (D/N) VCC-9600P (D/N)
VCC-9700P VCC-9500P

AF Zoom Camera

VCC-ZM400P (D/N) VCC-ZM300PA

Weatherproof AF

Zoom Camera

VCC-XZ400P (D/N)

Vandal Resistant Dome Camera

VDC-W1595VP

VDC-D1585VP (D/N)

VDC-C1575VP

Pan-focus Weatherproof

AF Zoom Camera

VCC-XZ200P (D/N)

Pan-focus Dome Camera with PT mechanism

VDC-DPN9585P (Network) (D/N)

VCC-PN9575P (Network)

VDC-DP9585P (D/N)

VCC-P9575P

Pan-focus Dome Camera B/W Camera

VDC-DP7585P (D/N)

VCC-P7575PA

VCC-P7575PA

VCB-3455P

VCB-3450P

VCB-3385P

VCB-3380P

Digital Video Recorder

DSR-HB8000

DSR-5716P

DSR-5709P

DSR-5016PA

DSR-5009PA

DSR-3716PA

DSR-3709PA

DSR-3706PA

Monitor

VMC-L1019P

VMC-L1017P

VMC-L1015P

VMC-8619PA

VMC-8615FP

Controller

VSP-9000

VSP-8500

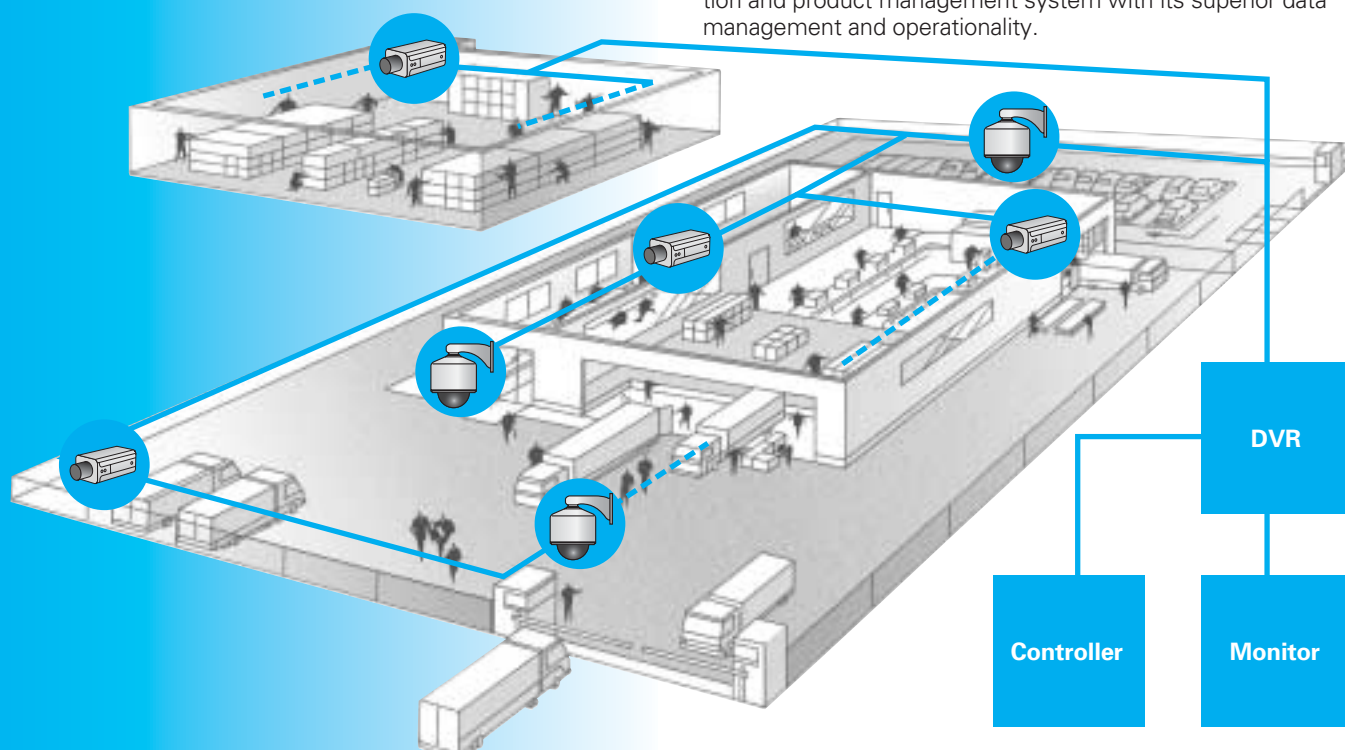
Security System Solutions

Hotel, Residential, Factory and Manufacturing Facilities

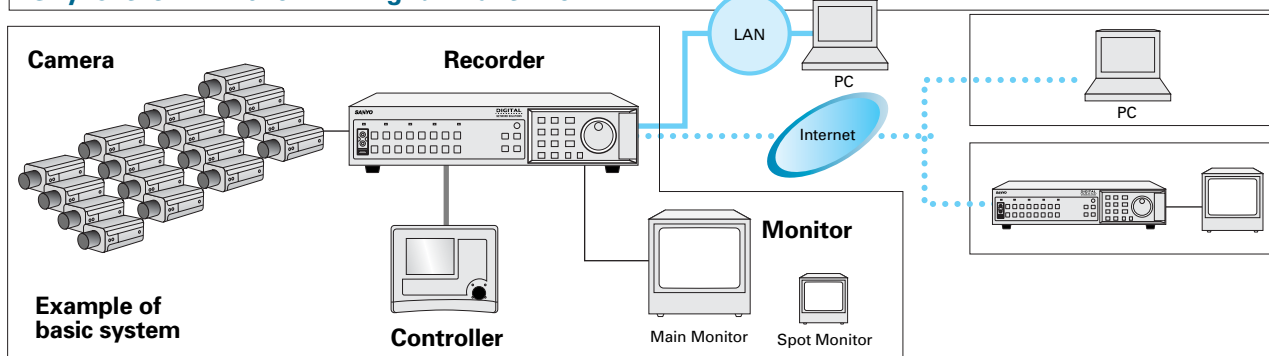
Surveillance systems suited to hotels, holiday resorts, condominiums, housing complexes manufacturing plants, distribution centers, warehouses, research laboratories, offices and related facilities

Prevention of vandalism and intrusion by outsiders with 24/7 systems for the protection of secure, comfortable living

For hotels and factories, where people, cars and objects come in and out frequently and round the clock, a reliable surveillance system is needed to create a safe and untroubled environment. Even for such a broad area, the SANYO digital surveillance system establishes a highly efficient crime-prevention and product management system with its superior data management and operability.



System configuration



Choose from the Sanyo line up

Replaceable Lens Camera

VCC-WD8575P (D/N) VCC-4795P (D/N)
VCC-6592P VCC-4790P (D/N)
VCC-6585P VCC-4115PA
VCC-6580P VCC-4110P
VCC-5885P

Dome-shaped Camera

VCC-9615P

Speed Dome Camera

VCC-9800P (D/N) VCC-9600P (D/N)
VCC-9700P VCC-9500P

AF Zoom Camera

VCC-ZM400P (D/N) VCC-ZM300PA

Weatherproof AF

Zoom Camera

VCC-XZ400P (D/N)

Vandal Resistant

Dome Camera

VDC-W1595VP

VDC-D1585VP (D/N)

VDC-C1575VP

Pan-focus Weatherproof

AF Zoom Camera

VCC-XZ200P (D/N)

Pan-focus Dome Camera

with PT mechanism

VDC-DPN9585P (Network) (D/N)

VCC-PN9575P (Network)

VDC-DP9585P (D/N)

VCC-P9575P

Pan-focus Dome Camera

VDC-DP7585P (D/N)

VCC-P7575PA

B/W Camera

VCB-3455P

VCB-3450P

VCB-3385P

VCB-3380P

Digital Video Recorder

DSR-HB8000

DSR-5716P

DSR-5709P

DSR-5016PA

DSR-5009PA

DSR-3716PA

DSR-3709PA

DSR-3706PA

Monitor

VMC-L1019P

VMC-L1017P

VMC-L1015P

VMC-8619PA

VMC-8615FP

Controller

VSP-9000

VSP-8500

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera - Lens

DVR

SSP System

Monitor

Example System

Security System Solutions

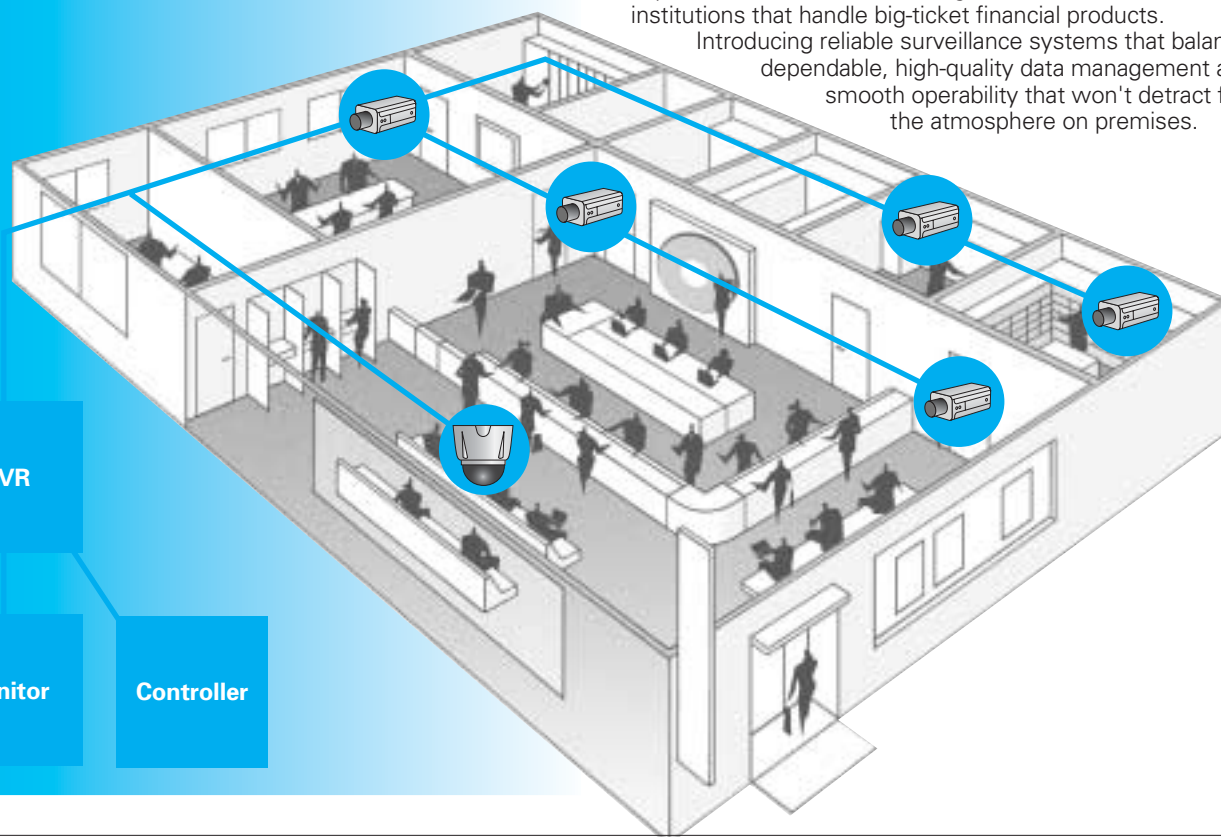
Medium-scale Financial, Medical and Public Facilities

Surveillance systems suited to banks, securities firms and other premises, such as hospitals, post offices, museums, art galleries, theaters, cinemas and casinos

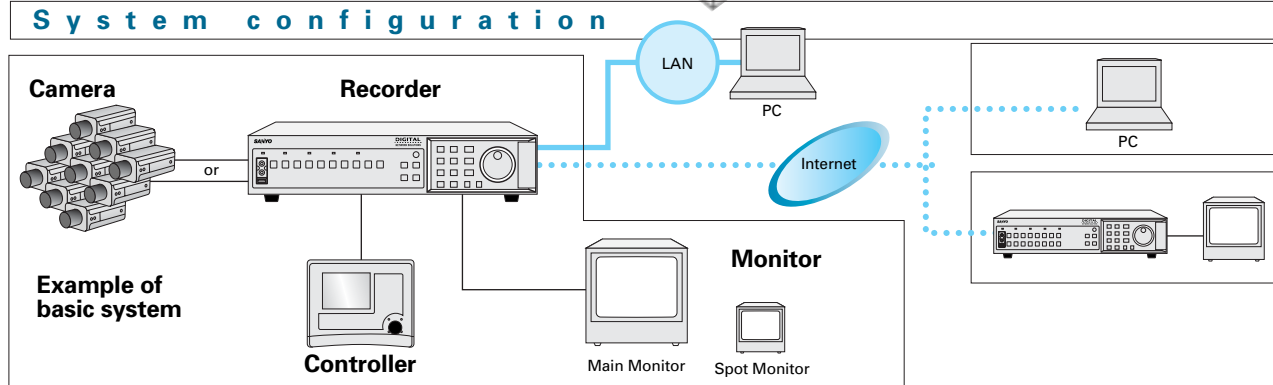
Surveillance systems targeting dependable frameworks for crime and disaster prevention, in response to customer needs for assurance and peace of mind

Crime and disaster prevention and high levels of security are required at banks, stockbrokerages and other financial institutions that handle big-ticket financial products.

Introducing reliable surveillance systems that balance dependable, high-quality data management and smooth operability that won't detract from the atmosphere on premises.



System configuration



Choose from the Sanyo line up

Replaceable Lens Camera

VCC-WD8575P (D/N) VCC-4795P (D/N)
VCC-6592P VCC-4790P (D/N)
VCC-6585P VCC-4115PA
VCC-6580P VCC-4110P
VCC-5885P

Dome-shaped Camera

VCC-9615P

Speed Dome Camera

VCC-9800P (D/N) VCC-9600P (D/N)
VCC-9700P VCC-9500P

AF Zoom Camera

VCC-ZM400P (D/N) VCC-ZM300PA

Weatherproof AF Zoom Camera

VCC-XZ400P (D/N)

Vandal Resistant Dome Camera

VDC-W1595VP
VDC-D1585VP (D/N)
VDC-C1575VP

Pan-focus Weatherproof AF Zoom Camera

VCC-XZ200P (D/N)

Pan-focus Dome Camera with PT mechanism

VDC-DPN9585P (Network) (D/N)
VCC-PN9575P (Network)
VDC-DP9585P (D/N)
VCC-P9575P

Pan-focus Dome Camera B/W Camera

VDC-DP7585P (D/N)
VCC-P7575PA
VCB-3455P
VCB-3450P
VCB-3385P
VCB-3380P

Digital Video Recorder

DSR-HB8000
DSR-5716P
DSR-5709P
DSR-5016PA
DSR-5009PA
DSR-3716PA
DSR-3709PA
DSR-3706PA

Monitor

VMC-L1019P
VMC-L1017P
VMC-L1015P
VMC-8619PA
VMC-8615FP
Controller
VSP-9000
VSP-8500

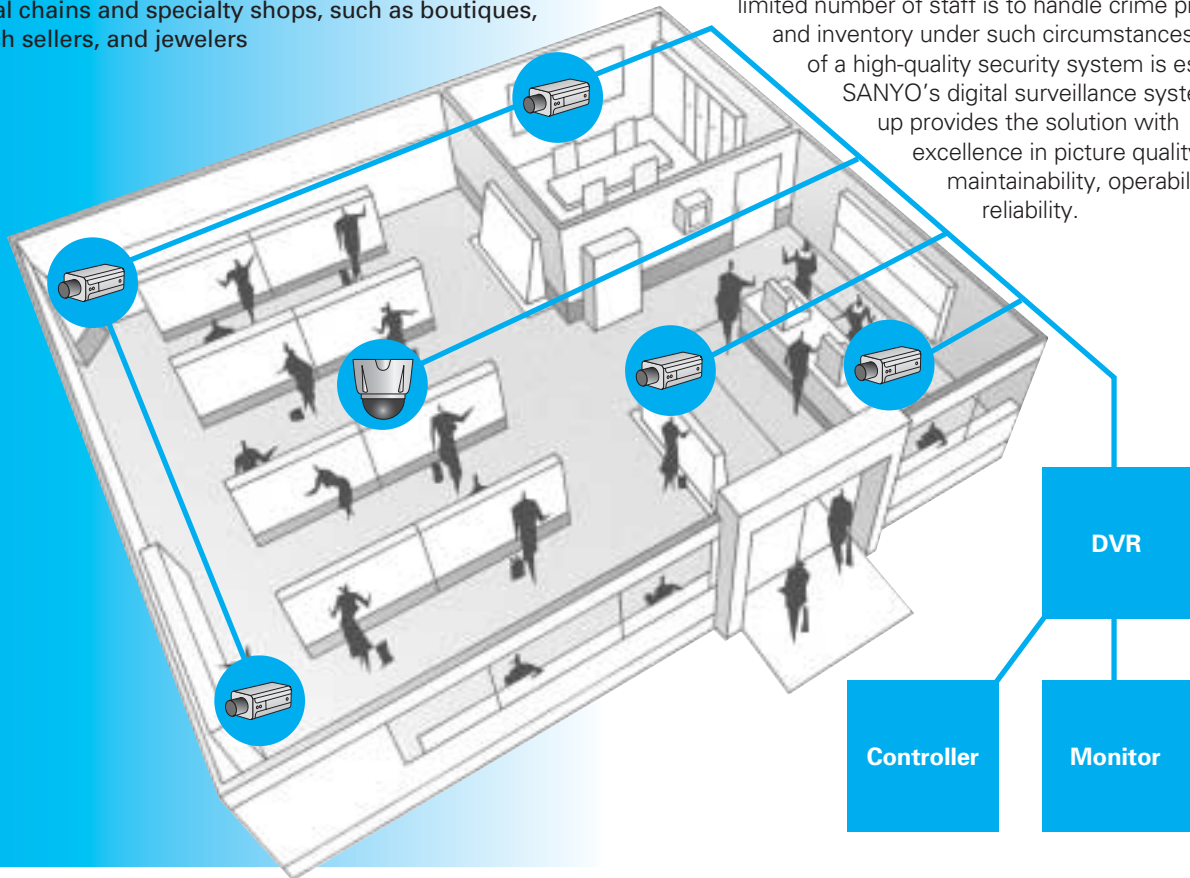
Security System Solutions

Small-scale Retail Facilities

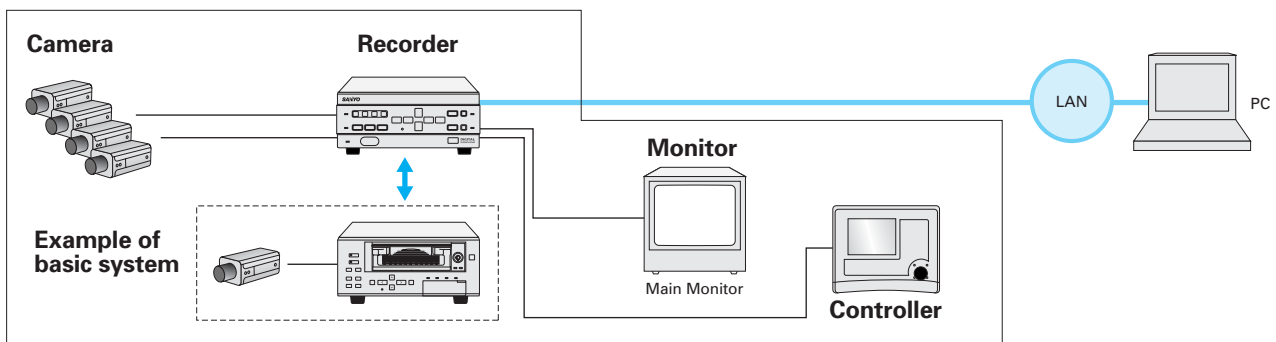
Surveillance systems suited to relatively small-scale retail facilities, including convenience stores and corner shops, drugstore, fast-food restaurants, bookstores, rental chains and specialty shops, such as boutiques, watch sellers, and jewelers

Simple surveillance systems for high-visibility, without the Need for Technical Staff

Large numbers of people stop by convenience stores and other small retail premises to do their shopping. If a limited number of staff is to handle crime prevention and inventory under such circumstances, the use of a high-quality security system is essential. SANYO's digital surveillance system line-up provides the solution with excellence in picture quality, maintainability, operability and reliability.



System configuration



Choose from the Sanyo line up

Replaceable Lens Camera

VCC-WD8575P (D/N) VCC-4795P (D/N)
VCC-6592P VCC-4790P (D/N)
VCC-6585P VCC-4115PA
VCC-6580P VCC-4110P
VCC-5885P

Dome-shaped Camera

VCC-9615P

Speed Dome Camera

VCC-9800P (D/N) VCC-9600P (D/N)
VCC-9700P VCC-9500P

AF Zoom Camera

VCC-ZM400P (D/N) VCC-ZM300PA

Weatherproof AF Zoom Camera

VCC-XZ400P (D/N)

Vandal Resistant Dome Camera

VDC-W1595VP
VDC-D1585VP (D/N)
VDC-C1575VP

Pan-focus Weatherproof AF Zoom Camera

VCC-XZ200P (D/N)

Pan-focus Dome Camera with PT mechanism

VDC-DPN9585P (Network) (D/N)
VCC-PN9575P (Network)
VDC-DP9585P (D/N)
VCC-P9575P

Pan-focus Dome Camera B/W Camera

VDC-DP7585P (D/N)
VCC-P7575PA
VCB-3455P
VCB-3450P
VCB-3385P
VCB-3380P

Digital Video Recorder

DSR-3706PA
DSR-300P
DSR-M814PA
DSR-M810PA
DSR-2004

Monitor

VMC-L1019P
VMC-L1017P
VMC-L1015P
VMC-8619PA
VMC-8615FP

Controller

VSP-9000*
VSP-8500*

* The DSR-2004 does not support connection.

System Chart

Specialty Camera

Network Camera

Pan-focus Camera

Camera · Lens

















DVR

SSP System

Monitor

Example System






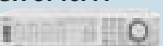
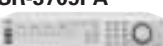
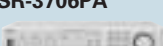



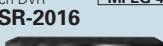

D	DSR-2004	4-channel Digital Video Recorder	49	VA-EXD1 W	Disc Writer Unit for DSR-3706PA / 3709PA / 3716PA	38, 46, 47		
	DSR-2016	16-channel Digital Video Recorder	49	VA-EXH	External HDD Unit for DSR-5709P / 5716P / 5009PA / 5016PA	38, 40, 42		
	DSR-300P	1-channel Digital Video Recorder	48	VA-RACMK1	Rack Mount Bracket			
	DSR-3706PA	6-channel Digital Video Recorder	47	VA-RACMK15 / 17 / 19	Rack Mount Bracket	53		
	DSR-3709PA	9-channel Digital Video Recorder	45	VA-RACMK2	Rack Mount Bracket	44, 46, 47, 48, 50		
	DSR-3716PA	16-channel Digital Video Recorder	45	VA-SW300	Removable HDD Viewer Software for DSR-300P	48		
	DSR-5009PA	9-channel Digital Video Recorder	43	VA-SW3050	Network recorder	20		
	DSR-5016PA	16-channel Digital Video Recorder	43	VA-SW5000	CCTV system Management Software	42, 44, 46, 47		
	DSR-5709P	16-channel Digital Video Recorder	41	VA-SW8000	DVR Utility Software for DSR-M814PA / DSR-M810PA Series	50		
	DSR-5716P	16-channel Digital Video Recorder	41	VAC-70	Camera Control Unit	33		
VC	DSR-HB8000	16-channel Digital Video Recorder	39	VC-0924	Dummy Camera	33		
	DSR-M810PA	1-channel Digital Video Recorder	49	VC-0996	Dummy Dome-shaped Camera	33		
	DSR-M814PA	4-channel Digital Video Recorder	49	VCB-3380P	1/3" B/W CCD High-resolution Camera	30		
	M	MPX-EX200	Extension Box	52	VCB-3385P	1/3" B/W CCD High-resolution Camera	30	
		MPX-EX210	Extension Box with power	52	VCB-3450P	1/3" B/W CCD High-sensitivity Camera	30	
		MPX-EX300	Video Distribution Box	52	VCB-3455P	1/3" B/W CCD High-sensitivity Camera	30	
		MPX-MX2005	Matrix Switcher	52	VCC-4110P	1/4" Color CCD DSP Camera	29	
		VA	VA-13FG04IR	Wide-angle IR Lens for 1/3" CCD Camera (f=0.4 mm)	31	VCC-4115PA	1/4" Color CCD Camera	29
			VA-13FG06IR	Wide-angle IR Lens for 1/3" CCD Camera (f=0.6 mm)	31	VCC-4790P	1/3" Color CCD High-resolution Day/Night Camera	26
			VA-13FG08IR	Wide-angle IR Lens for 1/3" CCD Camera (f=0.8 mm)	31	VCC-4795P	1/3" Color CCD High-resolution Day/Night Camera	26
VA-13FG28IR			Super Wide-angle IR Lensfor 1/3" CCD Camera (f=2.8 mm)	31	VCC-5885P	1/3" Color CCD High-resolution Camera	28	
VA-13VG2811ASIR			Standard Vari-focal IR Lensfor 1/3" CCD Camera (f=2.8 to 11 mm)	32	VCC-6580P	1/3" Color CCD High-resolution Camera	28	
VA-13VG308AS			Standard Vari-focal Lens for 1/3" CCD Camera (f=3 to 8 mm)	32	VCC-6585P	1/3" Color CCD High-resolution Camera	27	
VA-13VG308ASIR	Standard Vari-focal IR Lensfor 1/3" CCD Camera (f=3 to 8 mm)		32	VCC-6592P	1/3" Color CCD High-resolution Camera	27		
VA-13VG550T-LY	Tele Vari-focal Lens for 1/3" CCD Camera (f=5 to 50 mm)		32	VCC-9500P	1/4" Color CCD High-resolution AF Speed Dome Camera	8		
VA-20LAN	Network board for VCC-XZ200P / VCC-XZ400P		18	VCC-9600P	1/4" Color CCD High-resolution Day/Night AF Speed Dome Camera	8		
VA-20ST	SSP+Twisted pair board for VCC-XZ200P / VCC-XZ400P		18	VCC-9615P	1/3" Color CCD Indoor mini Dome Camera with Vari-focal Lens	24		
VA	VA-50AL	Attachment for VDC-DPN9585P / VDC-DP9585PVDC-DP7585P / VDC-C1175VP	17	VCC-9700P	1/4" Color CCD High-resolution AF Speed Dome Camera	7		
	VA-50AS	Attachment for VCC-PN9575P / VCC-P9575PVCC-P7575P / VCC-P7575PA	17	VCC-9800P	1/4" Color CCD High-resolution Day/Night AF Speed Dome Camera	7		
	VA-50BPL	Ceiling suspension bracket for VA-50AL / VA-50AS	17	VCC-P7575PA	1/4" Color CCD High-resolution Indoor mini Dome Camera	16		
	VA-50BPS	Ceiling suspension bracket for VA-50AL / VA-50AS	17	VCC-P9575P	1/4" Color CCD DSP High-resolution PT Indoor mini Dome Camera	15		
	VA-50BW	Wall mounting bracket for VA-50AL / VA-50AS	17	VCC-PN9575P	1/4" Color CCD High-resolution PT Indoor mini Dome Network Camera	11		
	VA-50H	Heater board for VCC-XZ200P / XZ400P / VDC-DPN9585P / DP9585P / DP7585P	15	VCC-WD8575P	1/3" Color CCD Wide Dynamic Range Day/Night Camera	25		
	VA-50LAN	Network boardfor VDC-DP7585P / VCC-P7575PA	17	VCC-XZ200P	1/4" Color CCD High-resolution Weatherproof Day/Night Zoom Camera	18		
	VA-50ST	SSP+Twisted pair boardfor VDC-DP7585P / VCC-P7575PA	16	VCC-XZ400P	1/4" Color CCD High-resolution Weatherproof Day/Night AF Zoom Camera	21		
	VA-51LAN	Network boardfor VDC-DP7585P / VCC-P7575PA	19	VCC-ZM300PA	1/4" Color CCD High-resolution AF Zoom Camera	22		
	VA-52LAN	Network boardfor VDC-DP7585P / VCC-P7575PA	19	VCC-ZM400P	1/4" Color CCD High-resolution Day/Night AF Zoom Camera	22		
VA	VA-80A	Attachment (Indoor use) for VCC-9800P / 9700P / 9600P / 9500P	9	VCT-31	Camera Mount	33		
	VA-80AC	Corner mounting adaptor for VCC-9800P / 9700P / 9600P / 9500P	9	VCT-92	Camera Mount Base	33		
	VA-80AP	Pendant mounting bracket for VCC-9800P / 9700P / 9600P / 9500P	9	VCZ-50	Smoked Cover for VCC-PN9575P / VCC-P9575P / VCC-P7575PA	17		
	VA-80BP	Pendant mounting bracket (Indoor use) for VCC-9800P / 9700P / 9600P / 9500P	9	VCZ-51	Half-Mirror Coverfor VCC-PN9575P / P9575P / P7575PA	17		
	VD	VA-80BW	Well mounting bracket for VCC-9800P / 9700P / 9600P / 9500P	9	VDC-C1575VP	1/3" Color CCD High-resolution Vandal-resistant Dome Camera	24	
		VA-80EX	Outdoor Housing for VCC-9800P / 9700P / 9600P / 9500P	9	VDC-D1585VP	1/3" Color CCD High-resolution Day/Night Vandal-resistant Dome Camera	23	
		VA-80F	Surface Cover for VCC-9800P / 9700P / 9600P / 9500P	9	VDC-DP7585P	1/4" Color CCD High-resolution Day/Night Vandal-resistant Dome Camera	16	
		VA-80LAN	Network board for VCC-9800P / 9700P / 9600P / 9500P	8	VDC-DP9585P	1/4" Color CCD High-resolution Day/Night Vandal-resistant PT Dome Camera	14	
		VA-80ME	In-Ceiling Bracket (closed type) for VCC-9800P / 9700P / 9600P / 9500P	9	VDC-DPN9585P	1/4" Color CCD High-resolution D/N Vandal-resistant PT Network Dome Camera	11	
		VA-80MF	In-ceiling bracket (open type) for VCC-9800P / 9700P / 9600P / 9500P	9	VDC-W1595VP	1/3" Color CCD High-resolution Wide Dynamic Range Vandal-resistant Dome Camera	23	
VA-82LAN		Network board for VCC-9800P / 9700P / 9600P / 9500P	8	VM	VMC-8615FP	15" High-resolution Color Video Monitor	55	
VA-AWM3		Arm Bracket	53		VMC-8619PA	19" High-resolution Color Video Monitor	55	
VA-BWM2		Wall Mounting Bracket	53	VMC-8621PB	21" Color Video Monitor	55		
VA-CDH60		Dome Camera housing	33	VMC-L1015P	15" Color LCD Monitor	54		
VA-CDH60C	Dome Camera housing	33	VMC-L1017P	17" Color LCD Monitor	54			
VS	VA-CM8C	Clear dome cover (outdoor housing) for VCC-9800P / 9700P / 9600P / 9500P	9	VMC-L1019P	19" Color LCD Monitor	54		
	VA-CM8S	Smoked dome cover (outdoor housing) for VCC-9800P / 9700P / 9600P / 9500P	9	VSP-8500	SSP System Controller	34		
	VA-CZ80	Smoked dome cover (indoor housing) for VCC-9800P / 9700P / 9600P / 9500P	9	VSP-9000	SSP System Controller	34		
	VZ	VA-DK1		33	VZU-COM300	Communication Board for DSR-300P	48	
		VA-DK2		17	VZU-SATB1	SCSI Board for DSR-5709P / DSR-5716P	40	
	VA-DT300	Hard Disk Tray for DSR-300P	48	VZU-SCB1	SCSI Board for DSR-5709P / DSR-5716P / 5009PA / 5016PA	40, 42		
	VA-EX8AB	32ch Alarm Board	52					
	VA-EX8CB	8ch Extension Board w/coaxial	52					
	VA-EX8EB	8ch Extension Board	52					
	VA-EX8MB	8ch Main Board	52					
VA-EXD1 B	Disc Writer Unit for DSR-5709P / 5716P / 5009PA / 5016PA	38, 40, 42						


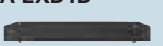



	Serial No.	Category	Lens	Color	B/W	CCD size	Horizontal resolution	Minimum illumination	S/N ratio	Backlight compensation	White-balance	Sync	Power supply
Speed Dome Cameras	1/4" Color CCD High-resolution AF Speed Dome Camera VCC-9800P  <small>DAY NIGHT</small>		Built-in 36x AF Zoom lens	✓	✓	1/4"	520 TVL	Color 1.0 lx B/W 0.05 lx (F1.6)	More than 50 dB	Multi-spot 5-section	ATW AWC Indoor Outdoor Fluorescent Manual	Internal sync. Line lock	24 V AC ±10% or 230 V AC ±10%
	1/4" Color CCD High-resolution AF Speed Dome Camera VCC-9700P 		Built-in 36x AF Zoom lens	✓	—	1/4"	520 TVL	1.0 lx (F1.6)	More than 50 dB	Multi-spot 5-section	ATW AWC Indoor Outdoor Fluorescent Manual	Internal sync. Line lock	24 V AC ±10% or 230 V AC ±10%
	1/4" Color CCD High-resolution AF Speed Dome Camera VCC-9600P  <small>DAY NIGHT</small>		Built-in 30x AF Zoom lens	✓	✓	1/4"	520 TVL	Color 0.8 lx B/W 0.04 lx (F1.4)	More than 50 dB	Multi-spot 5-section	ATW AWC Indoor Outdoor Fluorescent Manual	Internal sync. Line lock	24 V AC ±10% or 230 V AC ±10%
	1/4" Color CCD High-resolution AF Speed Dome Camera VCC-9500P 		Built-in 30x AF Zoom lens	✓	—	1/4"	520 TVL	0.8 lx (F1.4)	More than 50 dB	Multi-spot 5-section	ATW AWC Indoor Outdoor Fluorescent Manual	Internal sync. Line lock	24 V AC ±10% or 230 V AC ±10%
Network Cameras with PT mechanism	1/4" Color CCD High-resolution Vandal-resistant PT Network Dome Camera VDC-DPN9585P  <small>DAY NIGHT</small> PAN-FOCUS		Built-in 2.6x Pan-focus Zoom lens	✓	✓	1/4"	520 TVL	Color 1.2 lx B/W 0.06 lx (F1.9)	More than 50 dB	Multi-spot Center-zone	ATW AWC Manual	Internal sync. Line lock	24 V AC ±10% 12 V to 15 V DC
	1/4" Color CCD High-resolution PT Indoor mini Network Dome Camera VCC-PN9575P  PAN-FOCUS		Built-in 2.6x Pan-focus Zoom lens	✓	—	1/4"	520 TVL	1.9 lx (F1.9)	More than 50 dB	Multi-spot Center-zone	ATW AWC Manual	Internal sync. Line lock	24 V AC ±10% 12 V to 15 V DC
Dome Cameras with PT mechanism	1/4" Color CCD High-resolution Vandal-resistant PT Dome Camera VDC-DP9585P  <small>DAY NIGHT</small> PAN-FOCUS		Built-in 2.6x Pan-focus Zoom lens	✓	✓	1/4"	520 TVL	Color 1.2 lx B/W 0.06 lx (F1.9)	More than 50 dB	Multi-spot Center-zone	ATW AWC Manual	Internal sync. Line lock	24 V AC ±10% 12 V to 15 V DC
	1/4" Color CCD High-resolution PT Indoor mini Dome Camera VCC-P9575P  PAN-FOCUS		Built-in 2.6x Pan-focus Zoom lens	✓	—	1/4"	520 TVL	1.9 lx (F1.9)	More than 50 dB	Multi-spot Center-zone	ATW AWC Manual	Internal sync. Line lock	24 V AC ±10% 12 V to 15 V DC
Dome Cameras	1/4" Color CCD High-resolution Vandal-resistant Dome Camera VDC-DP7585P  <small>DAY NIGHT</small> PAN-FOCUS		Built-in 2.6x Pan-focus Zoom lens	✓	✓	1/4"	520 TVL	Color 1.2 lx B/W 0.06 lx (F1.9)	More than 50 dB	Multi-spot Center-zone	ATW AWC Manual	Internal sync. Line lock	24 V AC ±10% 12 V to 15 V DC
	1/4" Color CCD High-resolution Indoor mini Dome Camera VCC-P7575PA  PAN-FOCUS		Built-in 2.6x Pan-focus Zoom lens	✓	—	1/4"	520 TVL	1.9 lx (F1.9)	More than 50 dB	Multi-spot Center-zone	ATW AWC Manual	Internal sync. Line lock	24 V AC ±10% 12 V to 15 V DC
Weatherproof Zoom Cameras	1/4" Color CCD High-resolution Weatherproof Zoom Camera VCC-XZ200P  <small>DAY NIGHT</small> PAN-FOCUS		Built-in 2.6x Pan-focus Zoom lens	✓	✓	1/4"	520 TVL	Color 1.2 lx B/W 0.06 lx (F1.9)	More than 50 dB	Multi-spot Center-zone	ATW AWC Manual	Internal sync. Line lock	24 V AC ±10% 12 V to 15 V DC
	1/4" Color CCD High-resolution Weatherproof AF Zoom Camera VCC-XZ400P  <small>DAY NIGHT</small>		Built-in 22x AF Zoom lens	✓	✓	1/4"	520 TVL	Color 1.2 lx B/W 0.06 lx (F1.6)	More than 50 dB	Multi-spot 5-section	ATW AWC Manual	Internal sync. Line lock	24 V AC ±10% 12 V to 15 V DC
Zoom Cameras	1/4" Color CCD High-resolution AF Zoom Camera VCC-ZM400P  <small>DAY NIGHT</small>		Built-in 22x AF Zoom lens	✓	✓	1/4"	520 TVL	Color 1.2 lx B/W 0.06 lx (F1.6)	More than 50 dB	Multi-spot 5-section	ATW AWC Manual	Internal sync. Line lock	24 V AC ±10% 12 V to 15 V DC
	1/4" Color CCD High-resolution AF Zoom Camera VCC-ZM300PA 		Built-in 22x AF Zoom lens	✓	—	1/4"	520 TVL	2.0 lx (F1.6)	More than 50 dB	Multi-spot 5-section	ATW AWC Manual	Internal sync. Line lock	24 V AC ±10% 12 V to 15 V DC
Vandal Resistant Dome Cameras	1/3" Color CCD High-resolution Wide Dynamic Range Vandal-resistant Dome Camera with Vari-focal Lens VDC-W1595VP 		Built-in 2.3x Vari-focal Zoom lens	✓	—	1/3"	480 TVL	1.0 lx (F1.4)	More than 50 dB	—	ATW AWB	Internal sync. Line lock (24 V user)	24 V AC ±10% 12 V to 15 V DC
	1/3" Color CCD High-resolution Vandal-resistant Dome Camera with Vari-focal Lens VDC-D1585VP  <small>DAY NIGHT</small>		Built-in 2.3x Vari-focal Zoom lens	✓	✓	1/3"	520 TVL	Color 1.0 lx B/W 0.05 lx (F1.4)	More than 50 dB	ON / OFF	ATW AWB	Internal sync. Line lock (24 V user)	24 V AC ±10% 12 V to 15 V DC

[illegible]

DVR



SANYO Products Line Up 2007

	Serial No.	Category	Max HDD Capacity (Technically) per one bay	Picture resolution	Recording speed (IPS)	Number of channels	Multi-screen display	Jog shuttle	Width	SSP (RS-485) compatible	Network terminal	Backup media	Power supply
DVR	16ch Hybrid DVR DSR-HB8000 	MPEG-4	More than 2 TB	520 TVL	400IPS/16ch CIF, 200IPS/8ch Half D1, 100IPS/4ch D1	16 (Network camera max. 4 units)	4 / 9 / 16-screen, Plus display	—	431mm	✓	✓	Built-in DVD+R/RW CD-R/RW USB Flash memory	120V to 240V AC 50 / 60 Hz
	16ch DVR DSR-5716P 	JPEG2000	2 TB	520 TVL	100	16	4 / 9 / 16-screen, Plus display	✓	420mm	✓	✓	DVD+R/RW CD-R/RW with VA-EXD1B USB Flash memory	120V to 240V AC 50 / 60 Hz
	9ch DVR DSR-5709P 	JPEG2000	2 TB	520 TVL	100	9	4 / 9-screen, Plus display	✓	420mm	✓	✓	DVD+R/RW CD-R/RW with VA-EXD1B USB Flash memory	120V to 240V AC 50 / 60 Hz
	16ch DVR DSR-5016PA 	JPEG2000	2 TB	520 TVL	100	16	4 / 9 / 16-screen, Plus display	✓	420mm	✓	✓	DVD+R/RW CD-R/RW with VA-EXD1B USB Flash memory CF	120V to 240V AC 50 / 60 Hz
	9ch DVR DSR-5009PA 	JPEG2000	2 TB	520 TVL	100	9	4 / 9-screen, Plus display	✓	420mm	✓	✓	DVD+R/RW CD-R/RW with VA-EXD1B USB Flash memory CF	120V to 240V AC 50 / 60 Hz
	16ch DVR DSR-3716PA 	M-JPEG	1 TB	520 TVL	50	16	4 / 9 / 16-screen, Plus display	✓	420mm	✓	✓	CD-R/RW with VA-EXD1W CF	120V to 240V AC 50 / 60 Hz
	9ch DVR DSR-3709PA 	M-JPEG	1 TB	520 TVL	50	9	4 / 9-screen, Plus display	✓	420mm	✓	✓	CD-R/RW with VA-EXD1W CF	120V to 240V AC 50 / 60 Hz
	6ch DVR DSR-3706PA 	M-JPEG	1 TB	520 TVL	50	6	4 / 6-screen, Plus display	✓	420mm	✓	✓	CD-R/RW with VA-EXD1W CF	120V to 240V AC 50 / 60 Hz
	1ch DVR DSR-300P 	M-JPEG	540 GB	520 TVL	50	1	—	—	210mm	✓ (with VZU-COM300)	✓ (with VZU-COM300)	CF	Input 100 to 240 V AC, 50 / 60 Hz Output 12 V DC (Packaged AC Adapter)
	4ch DVR DSR-M814PA 	MPEG-2	1 TB	500 TVL	PAL: 50 NTSC: 60	4	4-screen	—	210mm	✓	LAN	CF with CF reader USB Flash memory	120V to 240V AC 50 / 60 Hz
	1ch DVR DSR-M810PA 	MPEG-2	1 TB	500 TVL	PAL: 50 NTSC: 60	1	—	—	210mm	✓	LAN	CF with CF reader USB Flash memory	120V to 240V AC 50 / 60 Hz
	16ch DVR DSR-2016 	MPEG-4	540 GB	500 TVL	400 CIF 25 D1	16	4 / 9 / 16-screen, Plus display	—	432mm	✓	✓	Built-in CD-R/RW USB Flash memory	Input 100 V to 240 V AC, 50/60 Hz Output 12 V DC
	4ch DVR DSR-2004 	MPEG-4	540 GB	250 TVL	100 CIF 25 D1	4	4-screen	—	350mm	—	✓	USB Flash memory	Input 100 V to 240 V AC, 50/60 Hz Output 12 V DC

	Serial No.	
External Unit	VA-EXH 	The VA-EXH is an expansion unit that employs 4 HDD bays and enables further extension of recording time. for DSR-5716P / DSR-5709P / DSR-5016PA / DSR-5009PA
	VA-EXD1B 	This external DVD / CD-Writer is a perfect match for DSR-5716P / DSR-5709P / DSR-5016PA / DSR-5009PA.
	VA-EXD1W 	This external CD-Writer is a perfect match for DSR-3716PA / DSR-3709PA / DSR-3706PA.
	VZU-SCB1 	The VZU-SCB1 enables the connection to an external RAID system. For further details on compatible devices, please contact the place of purchase for DSR-5716P / DSR-5709P / DSR-5016PA / DSR-5009PA.
	VZU-SATB1 	The VZU-SATB1 enables the connection to an external S-ATA system, VA-EXH. for DSR-5716P / DSR-5709P.






System

SANYO Products Line Up **2007**

Serial No.	Communication method	Control terminals	Graphic display	Menu language	No. of user maps	Operating conditions	Protocol	Power requirement (approx.)	Dimensions	Weight (approx.)
SSP System Controller VSP-9000 	RS-485, RS-422, RS-232C	RJ-11: 3 ports, D-SUB 9pin:1	320 x 240 pixels, backlit by white LED	English / French / German / Italian	26 maps, 40 keys for each map	Temperature: 5°C to 40°C [41°F to 104°F]	PTZ dome camera SANYO, SSP, H-SSP, Mark Mercer, Videotec, Emitec, Pelco-D, Sensormatic / American dynamics, VCL DVR / MUX: SANYO, Videotec Video Matrix switcher: Videotec	12 V DC, 1A (AC adaptor)	280(W) x 94(H) x 225(D) mm (w / 3-axis proportional joystick) (Graphic display: 115 x 86 mm)	900 g [31.7 oz.]
SSP System Controller VSP-8500 			—	English / French / German / Italian / Japanese	—		Cameras : SANYO SSP, H-SSP, Mark Mercer, Videotec, Emitec, Pelco-D, Macro, Sensormatic, VCL DVR : SANYO SSP		280(W) x 100(H) x 225(D) mm (w / 3-axis proportional joystick)	






Matrix

SANYO Products Line Up **2007**

Serial No.	Extension Box	Extension Box with power	Video Distribution Box	32ch Alarm Board	8ch Extension Board w/coaxial	8ch Extension Board	8ch Main Board
Matrix Switcher MPX-MX2005 	MPX-EX200 	MPX-EX210 	MPX-EX300 	VA-EX8AB 	VA-EX8CB 	VA-EX8EB 	VA-EX8MB 

Monitor

SANYO Products Line Up **2007**

Category	Serial No.	LCD	Color	Horizontal resolution	Video input	S-VIDEO input	Durable Metal	Multi system	Scan	Speaker	Power supply	Menu language
Monitor	19" Color LCD Monitor VMC-L1019P 	✓	✓	500TVL	1	✓	—	✓	1 : 1 / under / Over / Full scan	✓	12 V DC (AC adaptor)	English / French / German / Spanish / Italian / Chinese / Japanese
	17" Color LCD Monitor VMC-L1017P 	✓	✓	500TVL	1	✓	—	✓	1 : 1 / under / Over / Full scan	✓	12 V DC (AC adaptor)	English / French / German / Spanish / Italian / Chinese / Japanese
	15" Color LCD Monitor VMC-L1015P 	✓	✓	500TVL	1	✓	—	✓	1 : 1 / under / Over / Full scan	✓	12 V DC (AC adaptor)	English / French / German / Spanish / Italian / Chinese / Japanese
	19" Super High-resolution Color Video Monitor VMC-8619PA 	—	✓	800TVL	A / B	✓	✓	✓	Overscan underscan	✓	100V to 240V AC 50 / 60 Hz	English / French / German / Spanish / Italian / Russian / Chinese / Japanese
	15" Super High-resolution Color Video Monitor VMC-8615FP 	—	✓	800TVL	A / B	✓	✓	✓	Overscan underscan	✓	100V to 240V AC 50 / 60 Hz	English / French / German / Spanish / Italian / Russian / Chinese / Japanese



***Caution:** Please consult the instruction manual to ensure safe and proper operation of the product.



DI Company of SANYO Electric Co., Ltd. obtained Quality Management System ISO9001 and Environmental Management System ISO14001 certifications.

Distributed by:

SANYO

SANYO Electric Co., Ltd.

www.sanyosecurity.com

©2007 SANYO Printed in Japan '07.03. AP SMS140